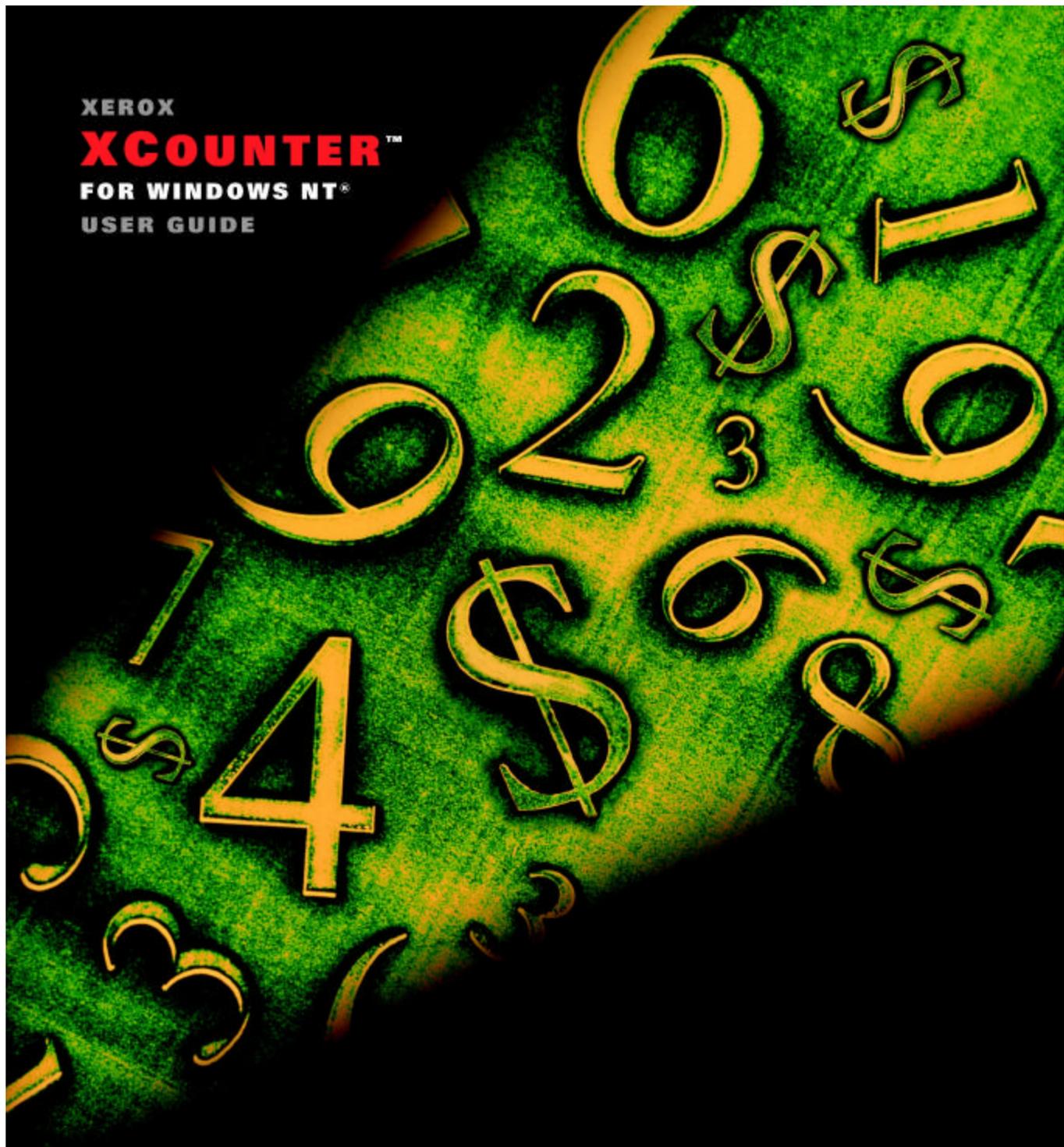


XEROX

# XCOUNTER™

FOR WINDOWS NT®

USER GUIDE



*DIGITAL*  
THE DOCUMENT COMPANY

XEROX

Copyright protection claimed includes all forms and matters of copyrightable materials and information now allowed by the statutory or judicial law or hereinafter granted, including without limitation, material generated from the software programs which are displayed on the screen such as styles, templates, icons, screen displays, look, etc.

XEROX and all Xerox products names and product numbers mentioned in this publication are registered trademarks of the Xerox Corporation. Other company trademarks are also acknowledged. PCL is a trademark of the Hewlett-Packard Company, Adobe, and PostScript are trademarks of Adobe Systems Inc. MS, MS-DOS, Windows NT, Windows 95, and Windows 98 are trademarks of Microsoft Corporation. NDS, intraNetWare and NetWare are trademarks of the Novell Inc. Macintosh is a trademark of Apple Computer Inc. UNIX is a trademark of The Open Group. OneTrac, is a trademark of Equitrac Corporation.

Changes are periodically made to this document. Technical updates will be included in subsequent editions.

Document Part Number 613P09460

---

# Table of Contents

**TABLE OF CONTENTS ..... 1**

**PRODUCT DESCRIPTION..... 4**

OVERVIEW.....4

**INTRODUCTION..... 5**

XCOUNTER™ FOR NT .....5

PROGRAM COMPONENTS AND UTILITIES.....6

HARDWARE AND SOFTWARE REQUIREMENTS.....7

**IMPORTANT CONCEPTS ..... 8**

PRINT SPOOLING .....8

TRACKING JOBS BY AUTHENTICATED USERS.....8

JOBS FROM MACINTOSH AND LPR CLIENTS.....8

NETWORKS WITH MULTIPLE/TRUSTED DOMAINS.....9

ERROR LOGGING.....9

YEAR 2000 COMPLIANCE.....9

**SERVICES AND PORT MONITORS ..... 10**

OVERVIEW.....10

USING XCONTROL FOR CONFIGURATION.....10

XCOUNTER PRINTER CONTROL SERVICE .....11

XCOUNTER DATA SERVER SERVICE .....11

XCOUNTER PORT MONITORS .....11

UPDATING PORT MONITORS.....11

XCOUNTER APPSOCKET PORT .....12

PAGE COUNT TYPES.....12

XCOUNTER LPR PORT .....13

PRINTER NAME.....13

LOCAL PORT BINDINGS.....14

COUNT PARTIALLY SENT/INTERRUPTED PRINT JOBS .....14

XCOUNTER PARALLEL PORT .....14

XCOUNTER OTHERPRINTER PORT .....15

**XCONTROL..... 16**

**QUICK START INSTALLATION..... 19**

SERVER SETUP .....19

ATTACHING XCOUNTER PORT MONITOR .....22

INSTALLING XPOPOP SUPPORT .....25

**TRACKING PRINTERS ATTACHED TO WINDOWS 95/98/ME WORKSTATIONS ..... 28**

SECURITY.....29

**SERVER CONFIGURATION..... 30**

XCOUNTER SHARED DIRECT ORY .....30

DELETING PAUSED JOBS.....31

NUMERICAL FORMAT .....	31
USER INFORMATION .....	31
DATA SERVER.....	31
LOG REJECTED JOBS.....	32
DATA SERVICE OPTIONS.....	32
LOG FILE CREATION .....	33
ACCOUNT BALANCE NOTIFICATION.....	33
MESSAGES.....	33
MESSAGE TRANSPORT .....	34
DEFAULT PRINTER CONFIGURATION.....	35
TRIAL PERIOD.....	36
INFORMATION REQUIRED TO FOR REGISTRATION.....	36
REGISTERING XCOUNTER.....	37
IMPORT GLOBAL POPUP SETTINGS.....	39
PRINTERS.....	39
PRINTER CONFIGURATION .....	40
ACCOUNTING.....	40
IF BELOW LOW BALANCE LIMIT .....	40
BANNER (SEPARATOR) TEMPLATE.....	41
DUPLEX HANDLING.....	41
PAUSE ALL JOBS.....	41
COUNT JOBS IN ADVANCE FOR DISPLAY .....	42
INCLUDE BANNER IN PAGE COUNT .....	42
DISABLE PRINT NOTIFICATION.....	42
ALLOW UNKNOWN USERS TO PRINT .....	43
ENABLE POPUP WINDOW .....	43
KEEP JOB PAUSED AFTER POPUP .....	43
EDIT INFORMATION MESSAGE.....	43
REJECT JOB TYPES.....	44
PRICES.....	44
PLOTTER AREA ACCOUNTING.....	45
CHARGE PER JOB .....	45
DEFAULT SIZE/PRICE.....	45
PRINT JOB RULES.....	46
PRINT JOB RULE ACTIONS.....	46
XPOPUP SERVER CONFIGURATION.....	47
XPOPUP - INFORMATION MESSAGE TYPE.....	48
XPOPUP - WINDOW TITLE/PROMPT .....	49
XPOPUP - CLIENT CODE AND SUBCODE NAMING.....	49
XPOPUP – CLIENT CODE/MATTER CODE LIST OPTIONS.....	49
XPOPUP - ENTRY FORM OPTIONS.....	50
XPOPUP – ID AND PASSWORD OPTIONS.....	50
CUSTOM DATABASE/AUTHENTICATION DLL .....	50
DISPLAY SAMPLE.....	51
EDIT INFORMATIONAL MESSAGE.....	51
XPOPUP - USERS EXEMPT FROM POPUP .....	51
<b>ACCOUNTING.....</b>	<b>52</b>
USER ACCOUNT BALANCES .....	52
NUMERICAL FORMAT .....	52
ACCOUNT BALANCES AND LOW BALANCE LIMITS.....	52
XCOUNTER.LOG FILE .....	54
ASCII DELIMITED FIELD NAMES:.....	54
XMANAGER.....	55
PRINTER HISTORY .....	56
CREATING REPORTS.....	57
<b>XPOPUP - PRINT JOB CLIENT BILLING AND PASSWORD SECURITY.....</b>	<b>59</b>

XPOPUP OVERVIEW .....59

RUNNING XPOPUP .....60

XPOPUP LOCAL SETTINGS.....60

MAINTAINING THE XPOPUP DATABASE .....61

CLIENT CODE ASSOCIATIONS.....62

DATABASE FUNCTIONS .....63

IMPORTING COMMA DELIMITED TEXT FILES.....63

IMPORTING AN EQUITRAC CLIENT NUMBER EQT FILE.....64

PASSWORD PROTECTING PRINT JOBS.....65

SHARED LOGON USER DATABASE .....65

**XCOUNTER UTILITIES.....66**

XACCOUNT.EXE .....66

XBALANCE.EXE .....67

XIMPORT.EXE .....67

XPOPUP.EXE.....68

XPLOTMGR.EXE.....69

**UPDATING XCOUNTER SOFTWARE.....70**

---

# Product Description

---

## Overview

---

*XCounter* is an enterprise printer Accounting/Queue management software package that controls and monitors printing resources over most wide and local area networks. This software offers two distinct features. First, *XCounter* provides comprehensive accounting. The accounting functionality is down to the user level, allowing organizations to track and manage printer usage. The flexible reporting, allows reports to be customized to meet specific business needs. For even further report customization, *XCounter* utilizes industry standard comma delimited files for quick and easy importing into a number of report writers. *XCounter* includes the following three types of page accounting:

Standard Page Accounting-	Tracks print job statistics transparent to user.
Charge-Back Page Accounting-	Tracks print job statistics as well as charge-back information input by the user.
Debit/Credit Page Accounting-	Tracks print job statistics as well as controls printing usage based on the user account balance. The cost of each printed page is deducted from the user account balance.

The second key feature offered by *XCounter* is queue management. System administrators can easily re-prioritize job queues, delete print jobs, copy print jobs or redirect print jobs to other queues via a simple drag and drop function. Print queues may be configured with a set of job rules. These rules allow the print jobs to be deleted, re-prioritized or automatically redirected based on the byte size or page size of the print job. Notification of print job deletion or redirection is then sent to the client via network broadcast or email.

*XCounter* runs as services and port monitors on Windows NT. It is a unique product in that it offers seamless printer page accounting, print job statistics and queue management in a heterogeneous network environment with network printers from any printer manufacturer.

*XCounter* for NT runs on *NT 3.51*, *NT 4.0* or Win2000 platforms. Because it is a server based software application, it will seamlessly fit into a network requiring no additional dedicated hardware.

---

# Introduction

---

## XCounter™ for NT

---

XCounter is software which tracks usage of printers hosted on Windows NT Workstation/Server. Features include:

- Counts pages on PostScript, PCL, and TIFF printers.
- Maintains a central log file of all print jobs, from print queues located on any Windows NT computer, allowing the integration of print activity of all servers in the domain/network. XCounter also supports tracking of jobs sent to locally attached parallel printers that are connected to Windows 95/98/Me/NT/2000 workstations.
- Maintains user account balances using database files, enabling system administrator to keep a single location for users in the domain.
- Works with multiple/trusted domains.
- Configurable popup window which appear at the client workstation before jobs are printed, allow users to enter client code/subcode, user name and passwords for shared logon printer accounting, network passwords for printing security, or network group names.
- Generates real time statistical reports on printing activity - by user, group, printer, or client code.
- Queue manipulation allows administrator to change print job priority within the queue or change the number of copies. Drag and drop functionality allows administrator to copy or move jobs to other print queues. Jobs can be released from the queue at a set time. Job rules may be configured to queues to allow jobs to automatically be deleted, reprioritized within the queue or moved to a different queue, based on job byte size or page count. Multi-platform functionality also allows administrator to drag and drop print jobs from NT print queues to Novell print queues or vice versa.
- Launch menu allows for printer specific applications to run from within XControl. The tool bar has a Launch Menu that can be configured to launch multiple applications, i.e. printer specific management programs.
- Printer monitoring via SNMP provides update information regarding printer and consumable status.

---

## Program Components and Utilities

---

XCounter for Windows NT incorporates the following services, application programs and utilities:

- **XCounter Printer Control Service**

An NT service running on the printer host that monitors print jobs.

- **XCounter Data Server Service**

This NT service can run on any NT Workstation or NT Server. It manages the entire database and log file data, collected from XCounter controlled printers.

- **XCounter Port Monitors**

XCounter uses the following port monitors:

XCounter parallel port monitor  
XCounter AppSocket port monitor  
XCounter LPR port monitor  
XCounter Other Port monitor

These port monitors are custom DLLs that are loaded onto the printer host. They are attached to the NT print spooler and the XCounter Printer Control Service to keep track of printing.

- **XControl.EXE** (Windows 95/98/Me/NT/2000)

Printer/queue management and XCounter configuration program.

- **XManager.EXE** (Windows 95/98/Me/NT/2000)

A comprehensive account balance management program that also creates statistical reports of printer activity.

- **XPlotmgr.EXE** (Windows 95/98/Me/NT/2000)

A print job submission utility with time scheduling and XPopup support.

- **ACCOUNT.EXE** (Windows 95/98/Me/NT/2000)

A command-line account balance management utility.

- **XImport.EXE**

A command-line utility for the importation of client code information.

- **XBalance.EXE** (Windows 95/98/Me/NT/2000)

Utility for users to check their own account balances.

- **XPopup.EXE** (Windows 95/98/Me/NT/2000)

A utility which pops up a window after each print job, allowing users to enter additional information for the logging of the job, such as client matter numbers, job codes, or shared login accounting.

---

## Hardware and Software Requirements

---

- A server that meets or exceeds Microsoft's NT/Windows 2000 operating requirements. Please refer to Microsoft NT/Windows 2000 installation documentation for this specification. The following service packs are recommended
  - NT 3.51 service pack 5 or above is recommended.
  - NT 4.0 service pack 5 or above is recommended.
  - Windows 2000 service pack
- 2MB minimum additional RAM for XCounter NT services. Memory requirements for NT are dynamic and will change depending on the server activity.
- Disk space required is 350K for program storage. The accounting log file will grow depending on the number of print queues tracked and the activity associated with these queues. Each entry in the accounting log may vary in size. For instance the document name field may vary in size. Under the most extreme conditions a log file entry for one job could be as high as 250 bytes in size. However, a size of about 128 bytes or less per entry would be average in most cases. This log file may be stored in any volume on any network server. A configuration option allows for scheduled log file storage that can be configured for day, week, month, or year.
- **XControl** is intended to run on a Pentium processor running on a Windows 95/98/Me, Windows NT 3.5.1 workstation, Windows NT 4.0/2000 workstation or server with a minimum of 32 MB of memory. The hard disk requirement for program storage is 3.5MB
- **XManager** can run from a Windows 95/98/Me, Windows NT 3.5.1 workstation, Windows NT 4.0/2000 workstation or server with a minimum of 32 MB of memory. The hard disk requirement for program storage is 400KB.
- **XPlotmgr can** run from a Windows 95/98/Me, Windows NT 3.5.1 workstation, Windows NT 4.0/2000 workstation or server with a minimum of 32 MB of memory. The hard disk requirement for program storage is 234KB.
- **XPopup 32 bit** can run from a Windows 95/98/Me, Windows NT 3.5.1 workstation or Windows NT 4.0/2000 workstation or server. The hard disk requirement for program storage is 280KB.
- **XBalance 32 bit** can run from a Windows 95/98/Me, Windows NT 3.5.1 workstation or Windows NT 4.0/2000 workstation or server. The hard disk requirement for program storage is 53KB.

---

## Important Concepts

---

---

### Print Spooling

---

**Note:** All jobs submitted to printers that are monitored by the XCounter Printer Control service and port monitors must only be spooled to the NT printer host.

Do not allow users to print directly from workstations to network printer addresses, or XCounter will not see those print jobs (unless XCounter services and monitors are installed on each workstation). Printers that are accessed in peer-to-peer modes by workstations using protocols such as AppleTalk, LPR, and DLC should be setup as follows:

- Configure the printer for the peer-to-peer mode on the server
- Setup sharing on the printer so users can spool jobs to the server's queue
- Reconfigure workstations to use the server's shared printers instead of peer-to-peer modes

---

### Tracking Jobs by Authenticated Users

---

If required to keep track of print jobs from users who are logged on/authenticated to NT servers, it is not necessary to import or create XCounter database entries for them. XCounter automatically looks up user/names on a Primary Domain Controller or other server that contains user accounts. If XCounter is enforcing user account balances/quotas, then users who have had no printer activity are assumed to have an account balance of zero.

For the tracking of printing from users sharing logons, see the section: **Popup - Enabling printer accounting while using shared logon names.**

---

### Jobs From Macintosh and LPR Clients

---

- **Mac usernames**

When Macintosh users submit print jobs to Windows NT printers, the username typically shows up in parentheses, such as **(username)**. XCounter automatically strips off the parentheses and processes the print job based upon the username inside them.

- **Mac authentication**

Windows NT Print Services for Macintosh do not require Macintosh users to logon to the NT machine in order to print, so it is possible for Mac users to impersonate other users. To ensure XCounter receives correct login name information, a third party PC integration program must be used. Thursby Software Systems Inc. produces a program that will facilitate these requirements.

- **LPR usernames**

When LPR clients submit print jobs to Windows NT printers using the Microsoft LPD service, the username typically shows up as a username followed by the client IP address in parentheses, such as username (192.168.1.27). XCounter automatically strips off the IP address portion and processes the print job based upon the username.

- **LPR authentication**

There is no protocol for user authentication using LPR/LPD, so it is possible for LPR users to impersonate other users.

To prevent unknown users from printing, an option can be set in XControl\printer configuration for each print queue.

---

## Networks With Multiple/Trusted Domains

---

When XCounter processes a print job, it verifies the existence of the print job owner by looking up the name on the designated server in Global Settings - Get User Information From (typically the Primary Domain Controller). If the user is not found in the current domain, trusted domains will be searched next.

The print job owner's home domain is listed along with the username (DomainName\UserName) in the first field of the log file.

To prevent unknown users from printing, an option can be set in XControl\printer configuration for each print queue.

---

## Error Logging

---

Any operating errors, such as configuration problems, jobs that cannot be counted, etc. will be recorded in the system event log and can be viewed using the Event Viewer utility (in the Administrative Tools program group).

Select **Log, Application**, and any messages issued by XCounter will be logged.

---

## Year 2000 Compliance

---

XCounter is entirely Year 2000 compliant. All dates have 4 digit year quantities.

---

# Services and Port Monitors

---

## Overview

---

There are 3 major components of the XCounter for NT accounting system:

- XCounter Printer Control service
- XCounter port monitors
- XCounter Data Server service

The XCounter Printer Control service and XCounter port monitors work together to manage printers and must be used at the same time on Windows NT printer hosts. The XCounter Data Server service manages all XCounter printer accounting data and can run on any Windows NT computer.

These components allow XCounter the flexibility to easily scale to the size of the network. For instance, if all printers are located on one NT printer host computer, all the data may be kept on the same computer by running both services and installing the port monitors. Likewise, in a distributed printing environment, the Printer Control service may be used with port monitors on many NT printer hosts, while running a centralized Data Server service on another Windows NT computer, or even one of the NT printer hosts.

---

## Using XControl for Configuration

---

XCounter is designed so that all of the NT printing parameters can be configured from any Windows 95/98/Me/NT/2000 computer on the network. XControl can be used to set XCounter configurations on printers and print servers, in addition to managing print jobs.

**Note:** Windows NT does not allow remote administration of printer ports, so the installation of XControl on each NT printer host will be required in order to install and configure ports.

---

## **XCounter Printer Control Service**

---

It is necessary for the XCounter Printer Control service to be running on NT printer hosts where XCounter port monitors are installed. Upon installation, the XCounter Printer Control service will be configured with startup type: "Automatic", which means that it will run at system boot time. However, the service may be started and stopped at any time using XControl from any Windows 95/98/Me/NT/2000 workstation on the network, if required network permissions are enabled.

When changing a printer's popup or pause all jobs setting, a restart of the Printer Control Service will be required. All other settings are dynamic (including adding new monitored printers), and the service need not be restarted.

The SYSTEM account should have Full Control permission on all XCounter-controlled printers.

---

## **XCounter Data Server Service**

---

The XCounter Data Server service manages all of XCounter's printer accounting data. It can run on any NT/2000 Workstation or Server, even if it is not an XCounter printer host. Each XCounter printer host has a Data Server configuration option that can be pointed to the same server - this allows the retention of all the printing data in one central location for easy access. The XCounter Data Server service only needs to be run on one computer. If the Data Server goes down after a job begins printing but before the job is logged, then XCounter will store the job information locally until the Data Server is restarted, at which time the locally stored data will be sent to the Data Server.

---

## **XCounter Port Monitors**

---

XCounter port monitors are required in order for XCounter to perform printer accounting. XCounter port monitors are custom Windows DLLs that are used by the spooler to send print data to printers. It is necessary for the XCounter Printer Control service to be running on NT printer hosts where XCounter port monitors are installed for printing to be functional.

---

## **Updating Port Monitors**

---

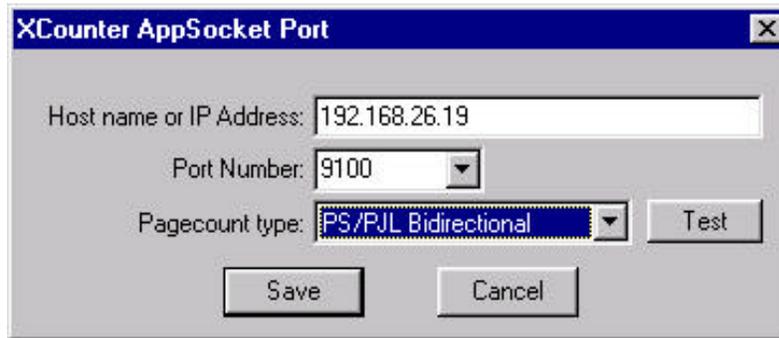
It is necessary to stop the Spooler service in order to update the XCounter port monitor software. XControl provides a way to update the XCounter port monitors from remote computers by stopping the Spooler, copying the files, and then restarting the Spooler. Stopping the Spooler will interrupt current print jobs. All the printer queues can be optionally paused or resumed in order to keep new jobs from starting before updating.

---

## XCounter AppSocket Port

---

AppSocket is raw printing using the TCP/IP protocol. Many network printers support AppSocket. The advantage of using it is that XCounter can obtain print job page counts from the printer (called bi-directional page counting) without having to calculate the page count itself (called manual page counting) - this reduces CPU utilization on the printer host. The disadvantage is that bi-directional counting requires more time for each job, as XCounter must wait for the job to finish before getting the page count from the printer.



A TCP/IP port number must be specified in the configuration. The most common port number is 9100, which is supported by Xerox, HP, and Lexmark printers. External print servers can use separate port numbers for each parallel port on the print server - for example, the HP JetDirect EX+3 uses ports 9100, 9101, and 9102.

---

## Page Count Types

---

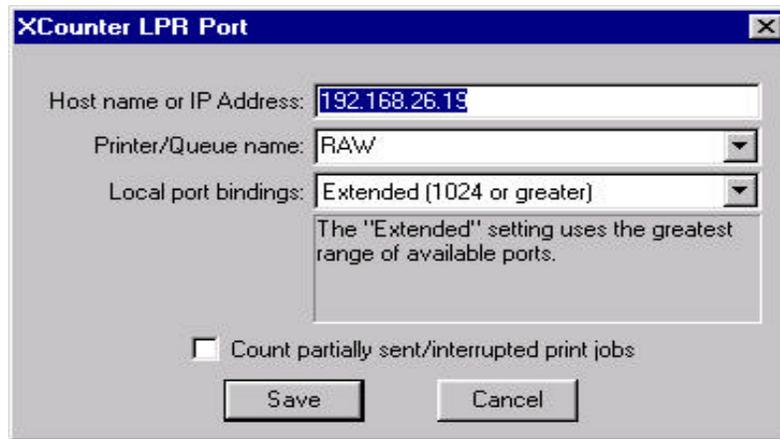
- **Manual:** XCounter calculates the page count of the print job.
- **PJL Bi-directional:** XCounter uses PjL commands to get the page count from the printer. While many printers support PjL, they may not all support PjL bi-directional page counting.
- **PS/PJL Bi-directional:** XCounter uses PostScript commands to get the page count from the printer, which are separated by PjL to get job status. This choice is probably the best if the printer supports PostScript and PjL.
- **PostScript Bi-directional:** XCounter uses PostScript commands to get the page count from the printer. This method is very dependent upon timing, and not all printers/PostScript interpreters act the same.

When configuring the port, a test function is provided to ensure proper operation of the bi-directional page count. However, when using the PostScript Bi-directional method, some printers may operate intermittently causing unreliable page counting.

---

## XCounter LPR Port

---



LPD/LPR is a standard that is supported by most network printers and operating systems, and uses the TCP/IP protocol. The XCounter LPR port monitor can be used to print to printers with network connections and to computers running LPD software that are hosting printers, such as Windows NT, UNIX, and NetWare.

**Note:** All page counting is manual when using LPR ports.

---

## Printer Name

---

A printer name will need to be specified in the configuration. On networked printers, often it is called "RAW". However, on LPD computer hosts, the administrator will have given it a specific name, which will need to be determined.

**Note:** The LPD/LPR standard requires that the LPR client specify the number of bytes in the print job before it is submitted. For this reason:

- Jobs which are submitted using data types other than RAW (such as EMF, called Metafile Spooling) must be converted to RAW first before they can be sent to the LPD host. This means that jobs will take longer to print because of the conversion process. Typically EMF jobs are submitted from other Windows NT clients. The use of the RAW data type can be setup in either the printer properties or the print processor
- Document Defaults, Advanced, Metafile Spooling. (RAW means, it is the printer's native language, such as PCL or PostScript.)
- Print jobs must be completely spooled before jobs can be sent. XCounter will automatically set the printer to start printing after the last page is spooled.

---

## Local Port Bindings

---

- RFC 1179 compliant - use this only if RFC 1179 compliance is required by the remote LPD host. The local TCP port numbers are restricted to the 721-731 range. This could result in conflicts with other LPR ports since only 11 local ports are available. Most devices do not require RFC 1179 compliance.
- Typical - uses local TCP ports 512-1023.
- Extended - uses local TCP ports 1024 and greater. This type of port binding will minimize the local port conflicts between other LPR ports and applications.

---

## Count partially sent/interrupted print jobs

---

Because of the protocol dependencies within LPR, an incomplete print jobs sent to a printer directly that utilizes LPR will print even though it is incomplete. This is due to the fact that the printer does not spool the data. Whereas, an incomplete print job sent to a print spooler would most likely be discarded due to the incorrect byte count on the data received. To enable or disable page counting for incomplete print jobs, a configuration option can be set within the XCounter LPR port monitor.

---

## XCounter Parallel Port

---



The XCounter parallel port monitor prints to local LPT ports. However, the XCounter parallel port monitor cannot share an LPT port with the default NT Local Port monitor, so ensure that no printers have been assigned to the LPT port that are required to use with XCounter. If no ports are available, the error message "All parallel ports are already in use" will be displayed.

**Note:** All page counting is manual when using LPT ports.

---

## XCounter OtherPrinter Port

---



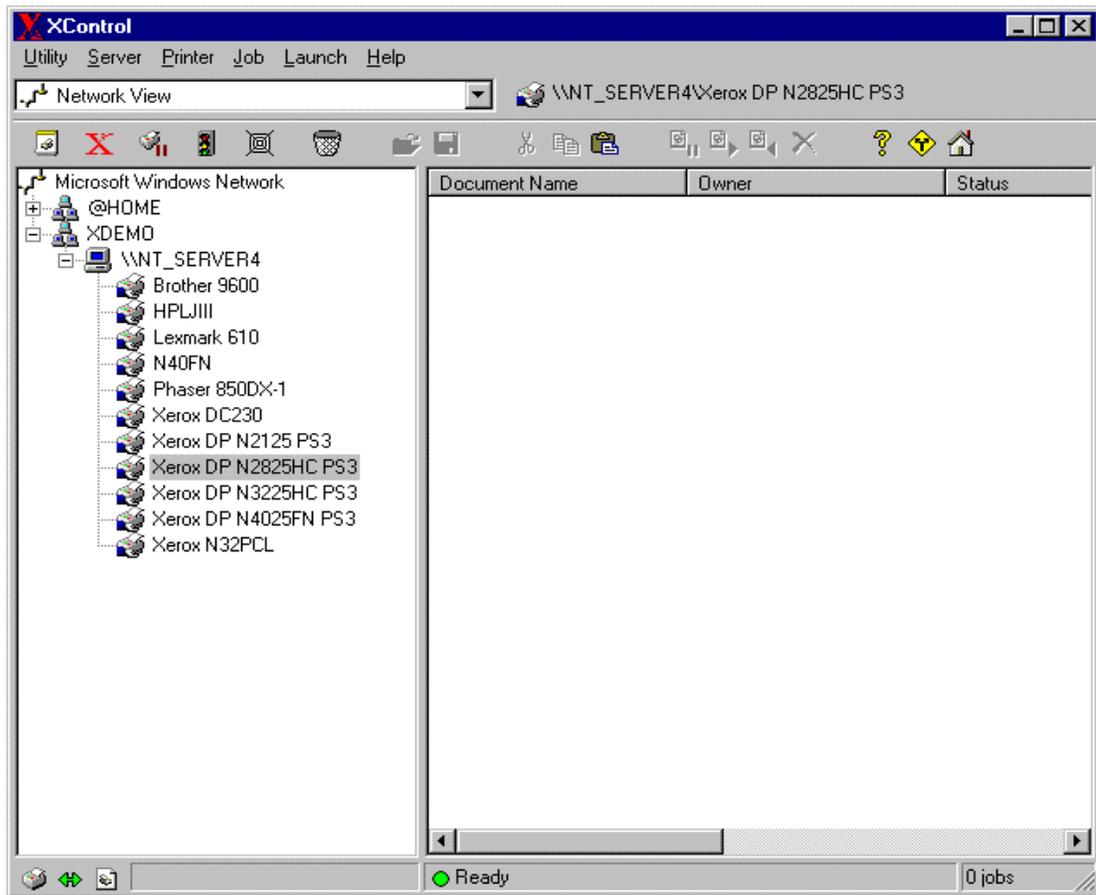
The XCounter OtherPrinter port sends jobs to other print queues. The OtherPrinter port cannot print to remote Windows printer shares - the queue must be located on the same NT printer host.

The purpose of the OtherPrinter port is to support printers that use network protocols that are not directly supported by XCounter port monitors, such as AppleTalk and DLC, or if the preference is to keep using currently installed ports. Since the OtherPrinter port is printing to a queue instead of to an actual printer, it may move jobs to the queue faster than they can actually print. XCounter accounts for, and logs the job as soon as it has been sent to the output queue without knowing whether the job has been printed. This setting controls the number of jobs that can be in the output queue at any time. For example, a setting of one means that no jobs will be moved until the output queue is empty.

**Note:** All page counting is manual when using OtherPrinter ports.

# XControl

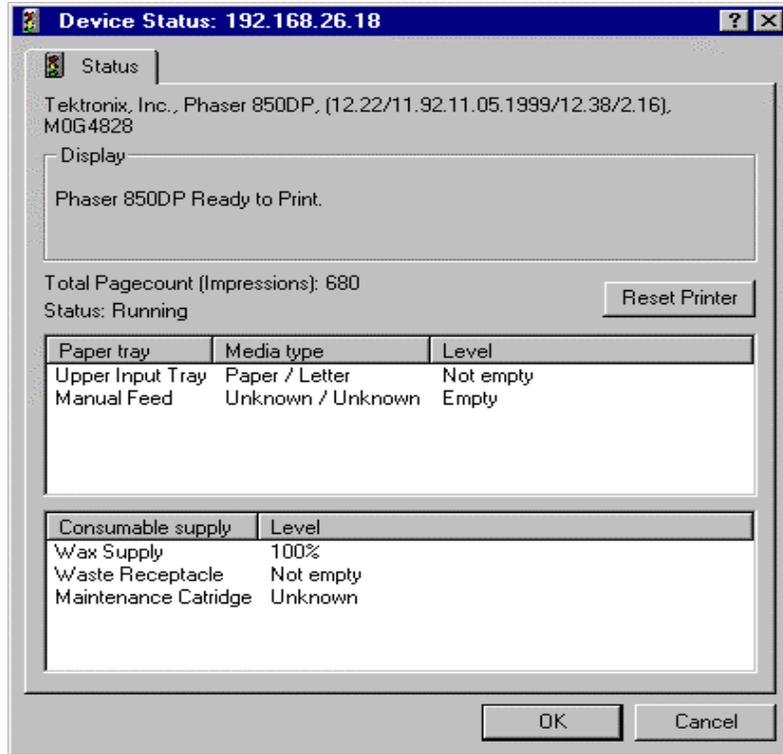
The XControl program is the primary interface to the XCounter program. The program provides a window into the network-printing environment. Various configurations, print queue monitoring and external program launch capabilities are provided within this program. The drag and drop functionality, drop down menus and tool bar provide a fast and effective way to manage network printers.



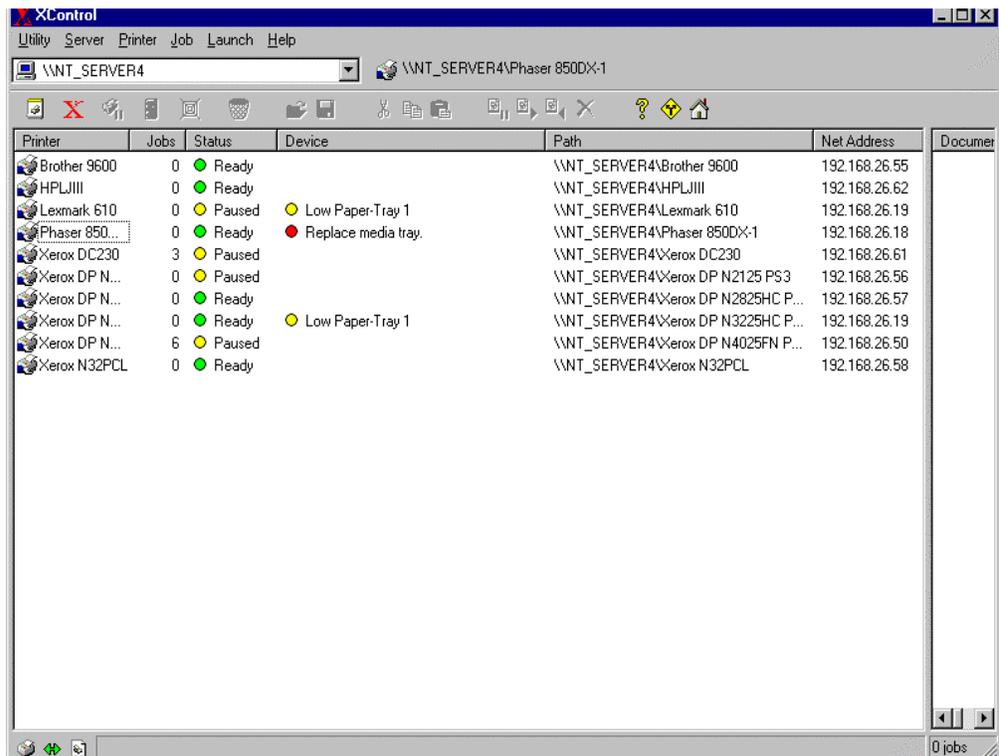
The following printer queue functions are available on the tool bar:

- **Create Printer**                      This button launches the add printer utility to facilitate installing additional printers.
- **XCounter configuration**              This button launches the XCounter configuration program.
- **Pause printer**                        Individual printers can be paused by selecting the printer and pressing this button.

- Device status The printer status may be obtain from SNMP compliant printers.



Status may be obtained from Individual printers by selecting the printer and pressing the device status on the tool bar. To display all printers select the "Server" drop down menu and select "Zoom".



- Connect to web printer Select the printer and press this button to launch the printer web page.
- Purge all jobs Press this button to delete all jobs in the printer queue.
- View job in queue Select a job in the printer queue and press this button to view job. This button launches a document viewer for this purpose.
- Save job in queue Select a job in the printer queue and press this button to save the spooler file. This spool file can be used to assist technical support in diagnosing printing problems.
- Cut job Select a job in the printer queue and press this button to delete from the printer queue and save to the clipboard.
- Copy job Select a job in the printer queue and press this button to copy from the printer queue to the clipboard. The Shift and Ctrl key may be used to select multiple print jobs.
- Paste job Select printer queue and press this button to copy print job from the clipboard to the printer queue.
- Pause job Select a job in the printer queue and press this button to pause the print job. The Shift and Ctrl key may be used to select multiple print jobs.
- Resume job Select a paused job in the print queue and press this button to release the pause. The Shift and Ctrl key may be used to select multiple print jobs.
- Delete job Select a print job in the printer queue and press this button to delete the print job. The Shift and Ctrl key may be used to select multiple print jobs.
- Help Press this button for context sensitive help.
- Preferences Press this button to set XControl user preferences
- Home Press this button to connect to the Xerox web site.  
<http://www.xerox.com/>

## Quick Start Installation

XControl enables XCounter to be installed and configured from any workstation on the network. (Except for printer port setup, which must be done locally at the printer host). XCounter software may be run locally on a network-attached workstation or from a shared network folder accessed through network browsing.

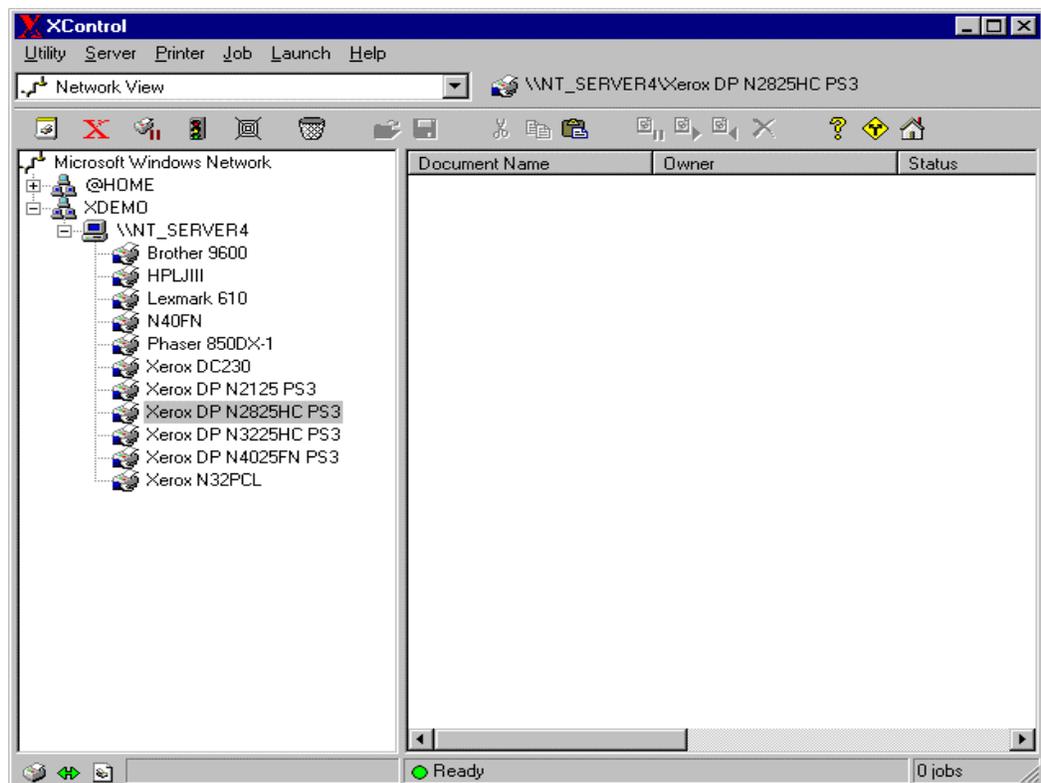
- Insert the XCounter CD into the CD-Rom drive
- Choose the installation type required NT or NetWare
- Select “Setup” and follow installation prompts

---

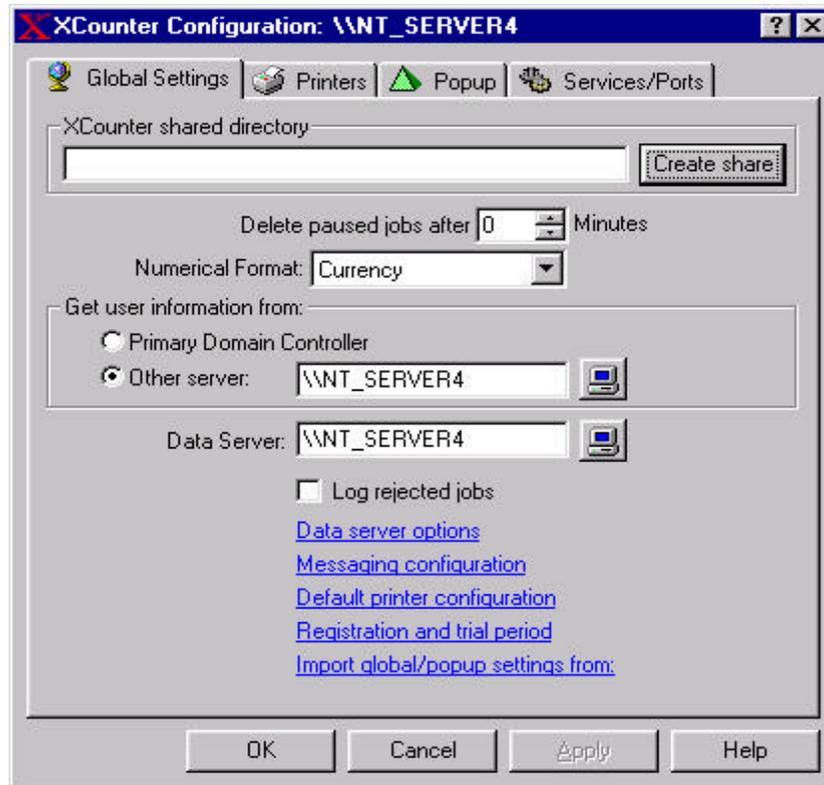
## Server Setup

---

- Launch XControl from the Start/Programs/XCounter for NT menu.
- From the graphic interface select Domain/Server on which XCounter is to be installed and press the “X” button on the tool bar.



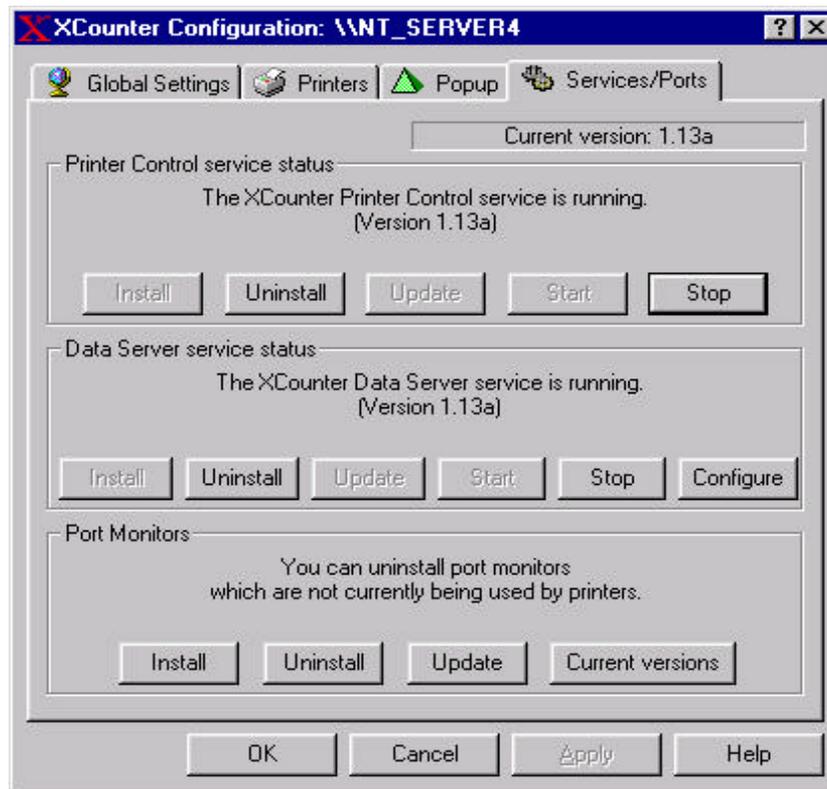
- At this point an XCounter server configuration dialog box will appear. A shared directory must be set up for XCounter data files to be accessed from the network.



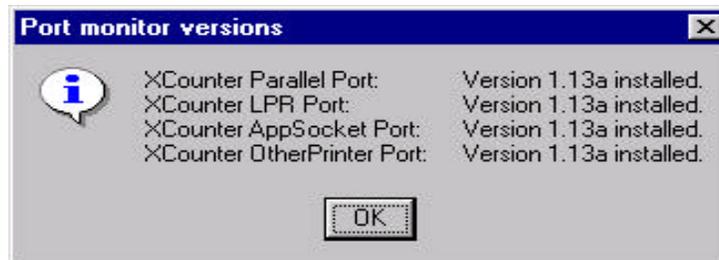
- Select the “Create share” button, at which point a dialog box will appear. Input a path and name for this shared directory. The XCounter shared directory will default to C:XCOUNTER.
- Select the “Create share” button. At this point, a shared directory will be created with the appropriate permissions to this directory.



- The XCounter services and port monitor software must now be installed. From the server configuration dialog box, select the “Services/Ports” tab. The Services/Ports dialog box will appear.

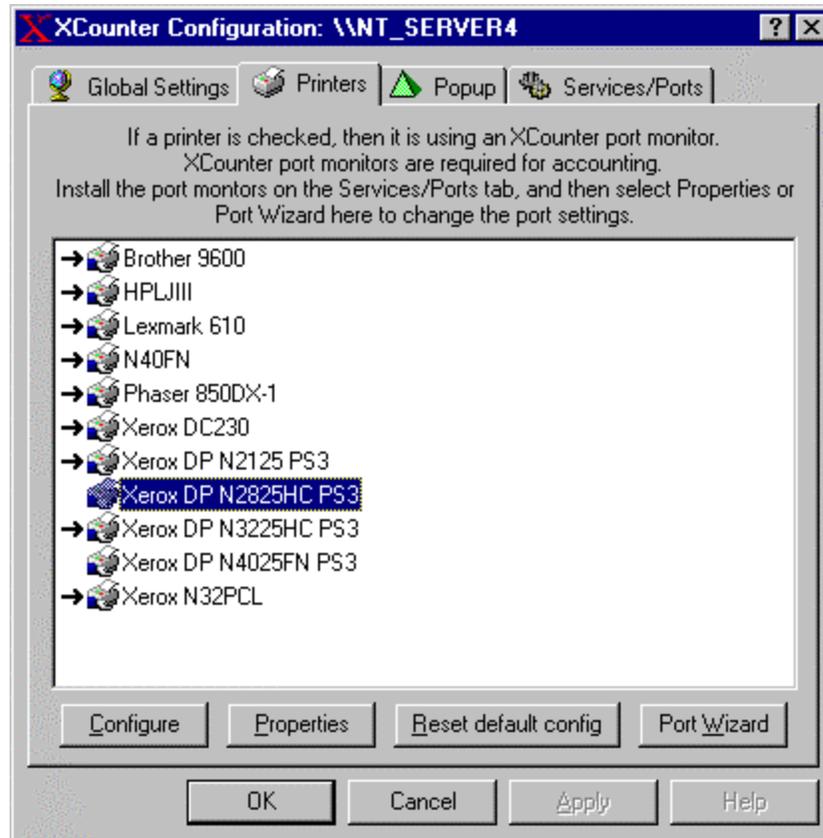


- Install the “Printer Control Service” by selecting the Install button. Start the service by selecting the “ Start” button. The status of “The XCounter Printer Control service is running”, as well as the version # will be displayed.
- Install the “Data Service” by selecting the “Install” button. Start the service by selecting the “ Start” button. The status of “The XCounter Data Server service is running”, as well as the version # will be displayed.
- Install the “Port Monitors” by selecting the “Install” button. To confirm installation and version # select the “Current versions” button. A Port monitor dialog box will be displayed.
- **Note:** Port monitors cannot be installed remotely, they must be installed at the printer host.

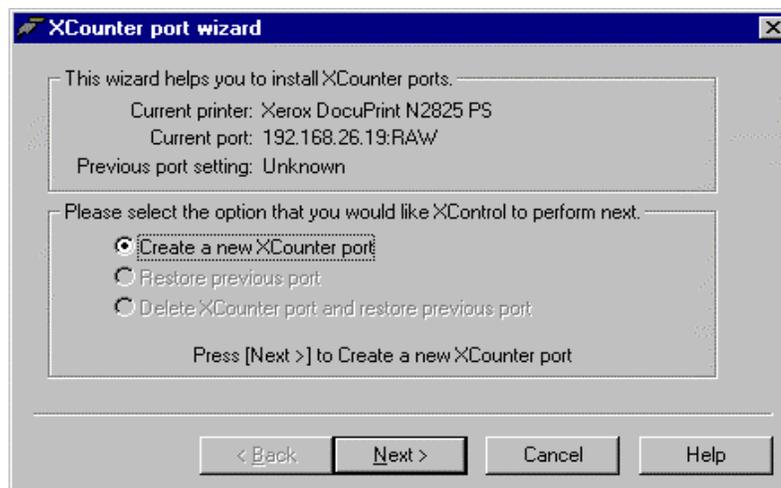


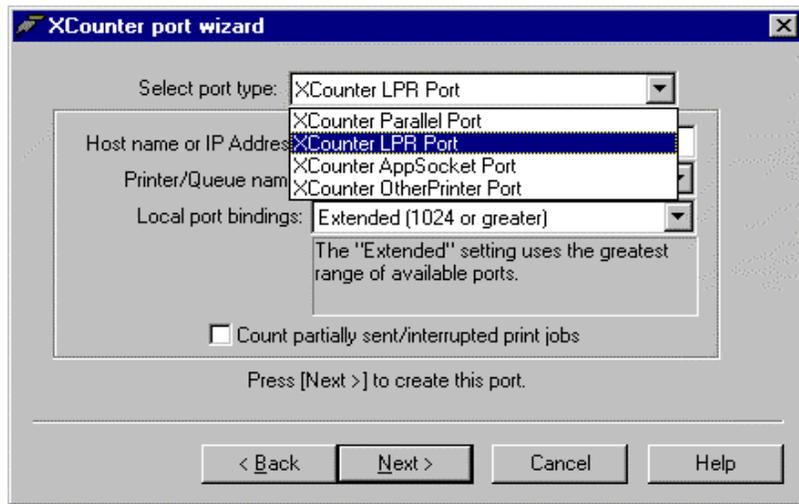
## Attaching XCounter Port Monitor

- For XCounter to actively monitor printer activity, the custom port monitors must be attached to all printers that are to be tracked. These XCounter port monitors may be installed via “Printer/Properties/Ports” or by using the XCounter port wizard.
- From the graphic interface select Domain/Server on which XCounter is installed and press the “X” button on the tool bar.
- At this point an XCounter server configuration dialog box will appear. Select the “Printers” tab. The installed printers will appear in the window

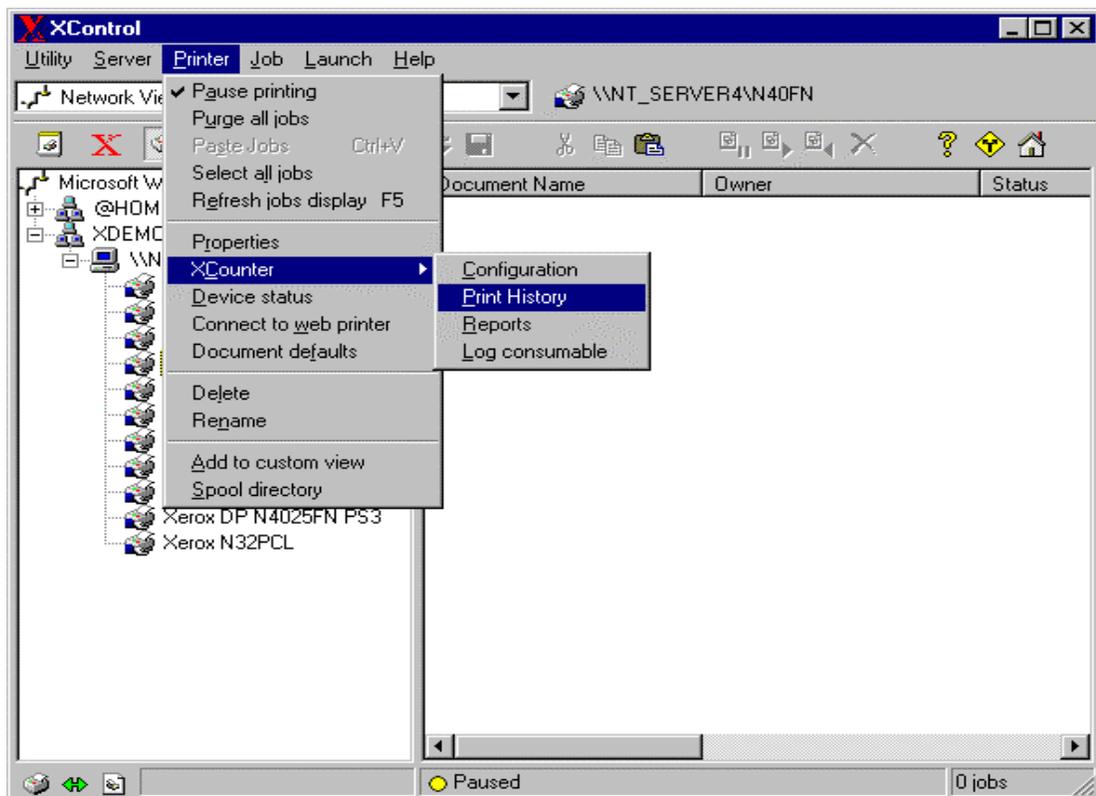


- Select the printer to be attached to XCounter and select the “Port Wizard”





- Select the type of port monitor required and verify the printer information. Select “Next” to create the printer port. After inputting the specific configuration information the XCounter port monitor will be attached to the printer.
- Run XControl, from the server configuration dialog box, select the “Printers” tab. The printer that was configured will appear with a pointing arrow. Add the appropriate XCounter port monitors to all printers that require tracking.
- Congratulations, you have installed XCounter software. To ensure proper operation of this program, send a print job to the printer. Select the printer from within XControl, right mouse click and select “XCounter/Print History”. A print history report will be displayed and this report should display the print job sent to the printer. Use this same procedure to attach additional printers to XCounter.



The screenshot shows a window titled "Print History: \\NT\_SERVER4\N32". It has a menu bar with "File" and "Email". Below the menu bar is a toolbar with icons for a floppy disk, a printer, a document, a warning sign, and a close button. The main area contains a table with the following data:

User	Document	Date/Time	Paper size	Size	Pages	Cost	Balance
XDEMO\Administrator	Test Page	02/14/2001 17:01	Letter	35132	1	0.00	0.00

At the bottom of the window, there are three summary fields: "Total jobs: 1", "Total pages: 1", and "Total cost: 0.00".

**Note:** XCounter provides numerous printer and server configuration options that can be set to meet custom requirements, please refer to the sections “Server Configuration” and “Printer Configuration” for more detailed information on these options.

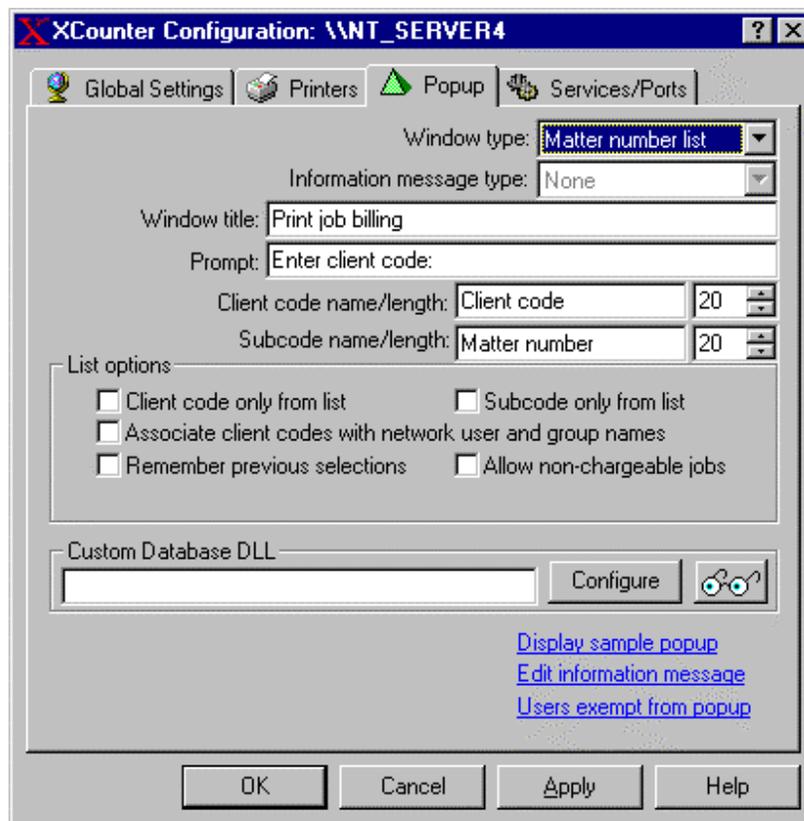
## Installing XPopup support

Once XCounter software has been installed and configured for Standard Page Accounting, the client charge back accounting method may be implemented if required. To install this type of accounting, there must be a client code database installed. To install this client database, please refer to the section “Maintaining the XPopup database”. Once this client database has been established, the following procedure may be used to install and configure the server for the XPopup client:

- Launch XControl from the Start/Programs/XCounter for NT menu.

From the graphic interface select Domain/Server on which XCounter is installed on and press the “X” button on the tool bar.

- At this point an XCounter server configuration dialog box will appear. Select the “Popup” tab. A Popup configuration window will appear.

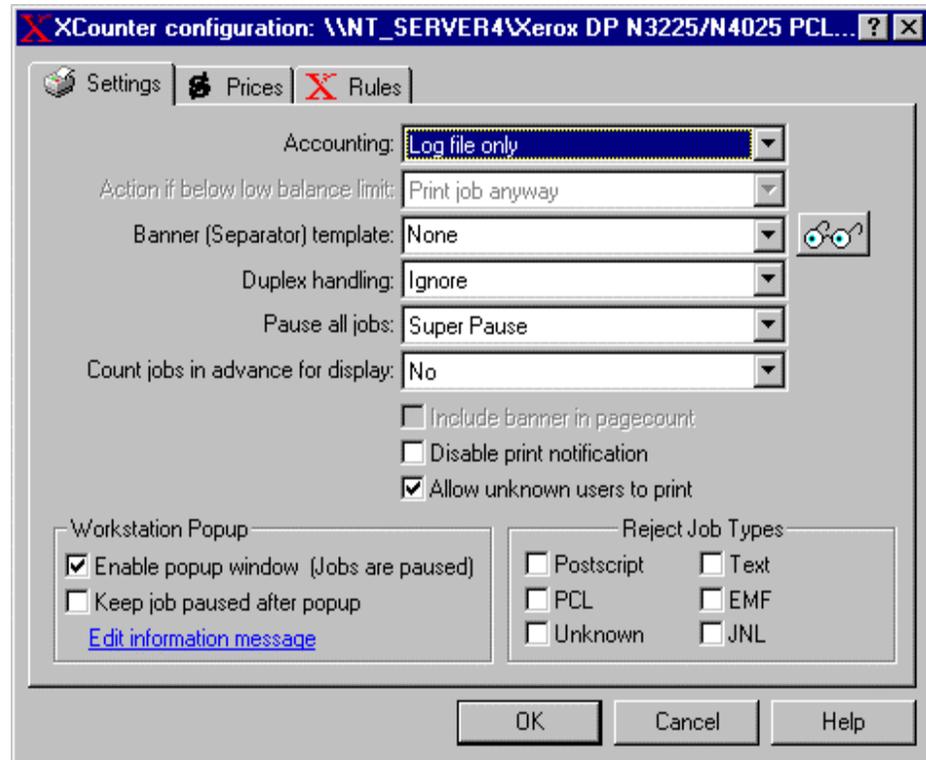


- Select the “Window type” and make any other required modifications or option changes then “Apply” the changes. Please refer to the section “Server configuration” for more detailed information.

The printer configuration specifies whether or not the XPopup client is enabled. This means that only printers that require the XPopup client need to be configured. The following procedure will enable the printer for the XPopup client:

- Return to the main XControl window.

From the graphic interface, select printer on which the XPopup client is to be enabled on and press the “X” button on the tool bar. A printer configuration window will appear.



- Select the “Enable popup window” this will enable the XPopup client for this printer. Notice that the “Pause all jobs” will indicate “Super Pause”. This pause function will prevent printing until the information is received from the client workstation.

**Note:** The Printer Control Service must be restarted after this configuration change, otherwise the XPopup function will not be enabled. Once the Printer Control Service has been restarted, the XPopup function is enabled. This will require the XPopup.exe program to be loaded on all client workstation/s printing to this printer. If the Xpopup.exe program is not loaded, the print jobs will be placed on indefinite hold.

- Load the XPopup on client workstation and print a job. Depending on the window type configured, the client popup window will look similar to the popup shown below. Please refer to the section “Running XPopup” for more information on loading XPopup.exe.

Printer: N40

Document: Client Billing

Enter client code: 77701 / 8989890

Client code	Description
77701	Recruiting Group
77702	Pro-Bono
77703	Personal Time
77706	Professional Activities Group
77707	Miscellaneous Firm Business

Matter number	Description
0010	Recruiting Committee Activi...
0050	Recruiting-In Firm Intvws/A...
0070	Recruiting - Law Schools

Print it Cancel job Reload list Search

Congratulations, you have now installed XCounter XPopup support. To ensure proper operation of this program, select this configured printer from within XControl, right mouse click and select “XCounter/Print History”. A print history report will be displayed and this report should display the print job sent to the printer including the client (and if enabled subcode) information. Use this same procedure to attach additional printers to XCounter.

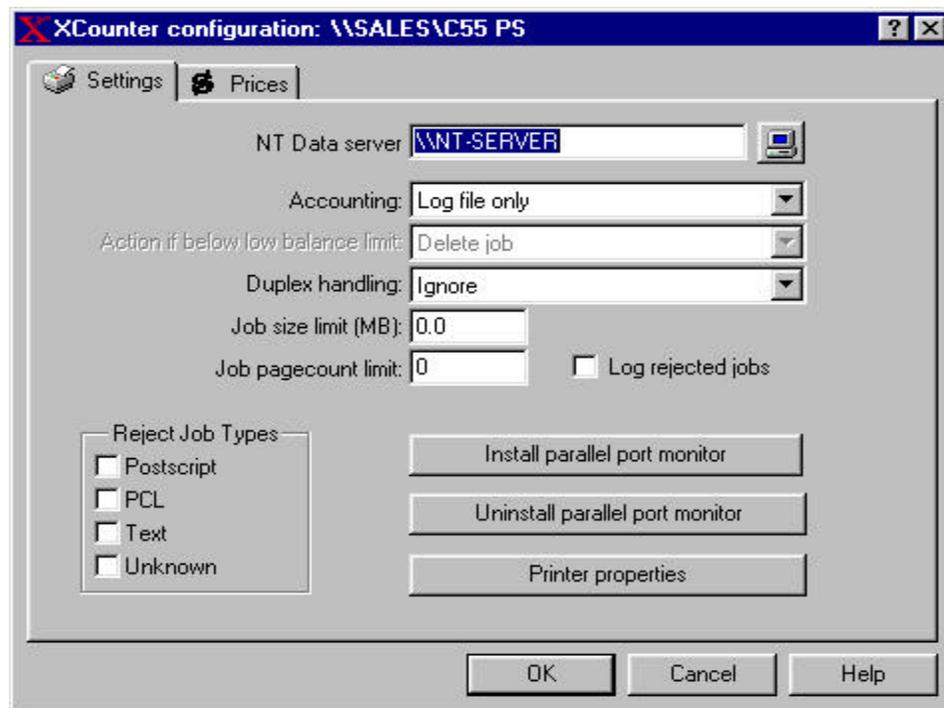
**Note:** The XCounter program provides numerous printer and server configuration options that can be set to meet custom requirements. Please refer to the sections “Server Configuration” and “Printer Configuration” for more detailed information on these options.

## Tracking printers attached to Windows 95/98/Me workstations

XCounter can also monitor printers that are connected to parallel ports of Windows 95 and 98/Me workstations, enabling sharing of these printers with other users. However, even if the printer is not shared and is used by a single user, XCounter can still monitor its usage. The data from Win 95/98/Me printers are sent to the NT Data Server and are integrated into the XCounter log files and accounting databases.

The printer's XCounter configuration can be administered remotely using XControl if the printer is shared and the workstation is running the Remote Registry Service. However, printers, port installation must be done on the workstation where the printer is located as they are for NT. Use the following procedure to configure a Win95/98/Me local printer for XCounter:

- Run the XControl program from the Workstation that the local printer is attached to. Select the locally attached printer and press the "X" button on the toolbar. A printer configuration window will appear.
- Select the Data Server to which the printer data is to be stored on.



- Select the type of accounting desired. Refer to the “Printer Configuration” section for additional information.
- Select any other option/s required. Refer to the “Printer Configuration” section for additional information.
- Install the XCounter Parallel Port Monitor and select which port to use (XCOUNT\_LPT1, XCOUNT\_LPT2, etc.).

All messages from XCounter printers on Win 95/98/Me (rejected jobs, insufficient balance, etc.) are sent to users from the NT Data Server.

There are certain restrictions as to how XCounter manages locally attached printers on Win 95/98/Me as compared to their NT counterparts. The limitations are as follows:

- Banner pages are not supported.
- Rules are not supported - however, there are job size and page count limits to prevent large jobs from printing to these printers.
- Pausing of all jobs is not supported.
- The XPopup program is not supported.

---

## Security

---

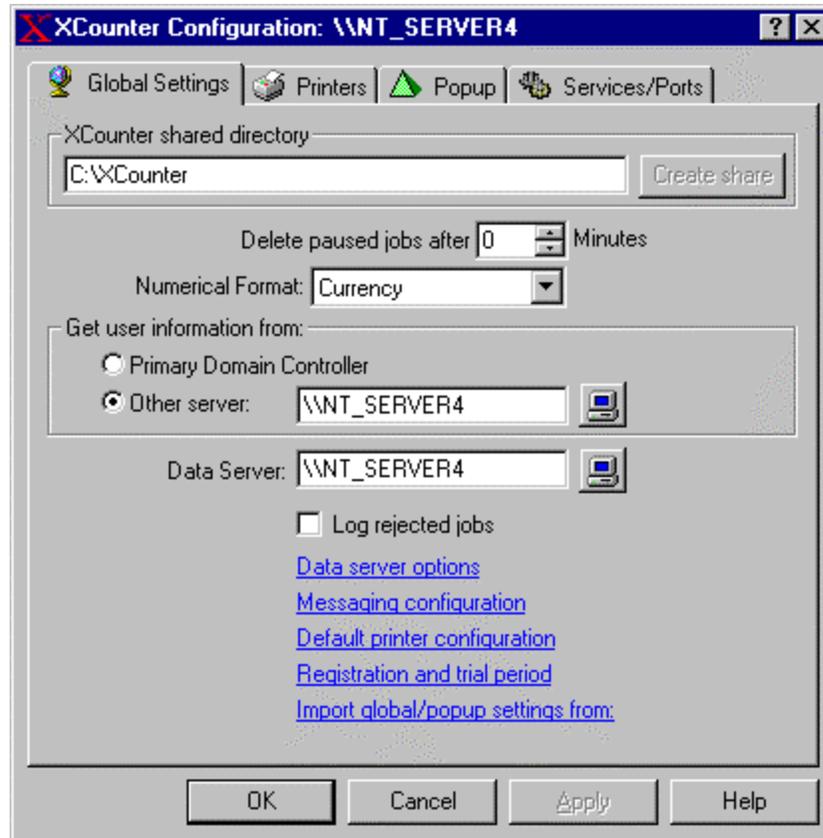
Windows 95 and 98/Me are generally insecure, and the XCounter settings are stored locally. In environments where users are charged for printing, it is possible for malicious users to tamper with printer settings in order for their print jobs to escape detection. In such cases, explore the possibility of enforcing system policies (see the Windows 95 and 98 Resource Kits) to prevent access to Printers, Control Panel, and Run (on the Start Menu). Restricting access to RegEdit and the DOS Command Prompt may also be required.

If the user changes or in anyway disables the port monitor, XCounter will no longer have the ability to track and log printer activity on the locally attached printer. The following would be ways in which a user could disable XCounter from functioning correctly.

- Changing the printer port from XCOUNT\_LPTx to LPTx to escape print job detection.
- Users accessing the registry to change XCounter configuration settings.

# Server Configuration

This section will describe the various server configuration options for XCounter. These configuration options will allow XCounter software to be customized to meet specific client, administration, and network requirements.



## XCounter shared directory

The computer where the XCounter Data Server service is running needs to have a shared directory (named XCounter) where the XCounter utilities can read configuration information. To create an XCounter share directory press the “Create share” button. A file window will open to allow the creation of this shared directory in any path desired.

The XCounter share directory should have read rights for all users using XControl, XManager or XPopup. XControl saves the configuration and database files in the XCounter shared directory.

---

## Deleting Paused Jobs

---

Paused print jobs can be deleted after a specified number of minutes. A value of zero (0) disables this feature. This setting only applies to printers using XCounter port monitors.

---

## Numerical Format

---

The numerical format determines how costs and balances are displayed and reported. This option works together with the printer media prices configuration to allow either charging by the page or by currency.

- **Pages** -One accounting unit = One page. Use this option to allocate printing quotas in number of pages.
- **Currency** -Accounting is kept in terms of local currency. Use this to option to allocate printing quotas in terms of currency.

The type and format of the local currency is determined from the local Windows settings.

---

## User Information

---

XCounter can be configured to obtain network user information dynamically from either the Primary Domain Controller or any other server that contains the user information. This information is used to associate network users with the XCounter account/balance database. This database stores the users ID and account balances. The options to obtain this information are as follows:

- **Domains** -Select Primary Domain Controller.
- **Workgroups** -Select the NT Server where user accounts are located.

---

## Data Server

---

The XCounter Data Server service manages all of XCounter's printer accounting data. This server stores the transaction log file, account balance and popup client code databases. The XCounter Data Server can run on any NT/2000 workstation or server, even if it is not an XCounter printer host.

When selected the Data Server option will display a list of domains from which a data server may be selected.

Each XCounter printer host has a Data Server configuration option that can be pointed to a particular data server - this allows all of the printing data to be kept in one central location for easy access.

The XCounter Data Server service is only required to run on one NT/2000 server/workstation on the network, though multiple data servers can be configured if desired.

- The XCounter log file and account balance databases are stored in the “\\DataServer\XCounter\Data” directory on the Data Server.
- Users should be given Read Permission to the XCounter share directory. This directory contains Global Settings and the popup client code database.
- Administrators, users who need to manage account balances, and users who need to get printing statistics should be given read/write permission to the data directory. For privacy and security purposes, normal users should not be given any access to this directory.

---

## Log Rejected Jobs

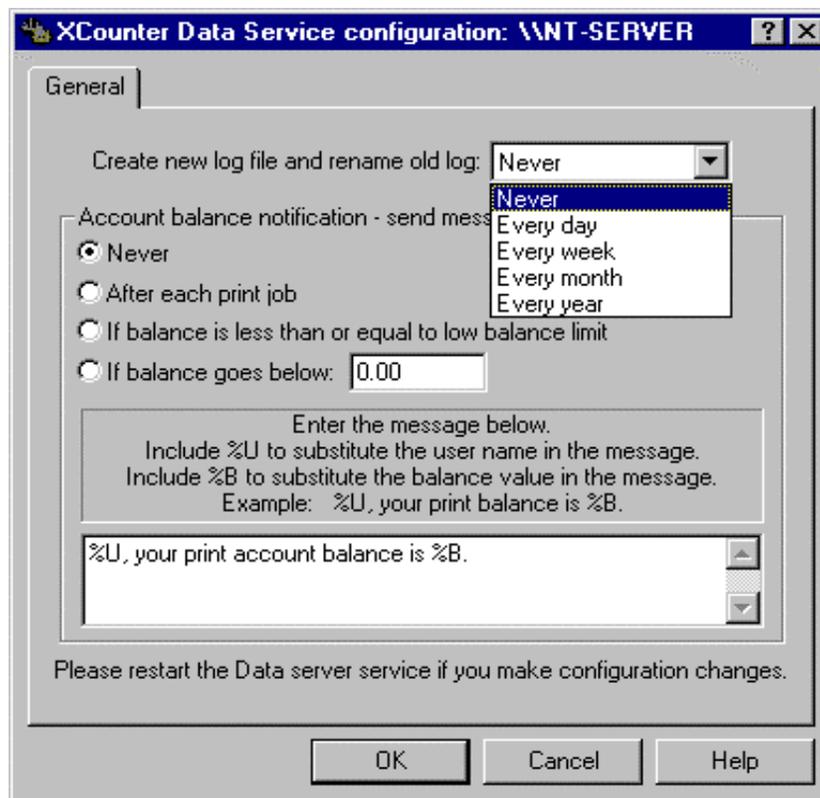
---

If “Log rejected jobs” is enabled, jobs that are rejected for any reason (insufficient balance, invalid paper size, etc.) are written to a text file called “REJECT.TXT”, on the Data server. This log file is located in the \XCounter\Data directory. This file will grow indefinitely, so make sure that it is monitored and deleted periodically.

---

## Data service options

---



## Log file creation

XCounter can close and rename the transaction log file at defined intervals. These intervals are daily, weekly, monthly, and yearly. The action will take place at 12:00AM daily, 12:00AM Sunday weekly, 1200AM on the last day of the month, or 12:00AM December 31. The log file rename syntax is in numeric format Year\_Month\_Day. If "Never" is selected, the log file will grow indefinitely and will need to be monitored manually.

## Account balance notification

When using Credit/Debit type accounting, XCounter can be configured to send notification messages back to the users. By selecting the appropriate button, these account balance notifications can be configured and sent under the following conditions:

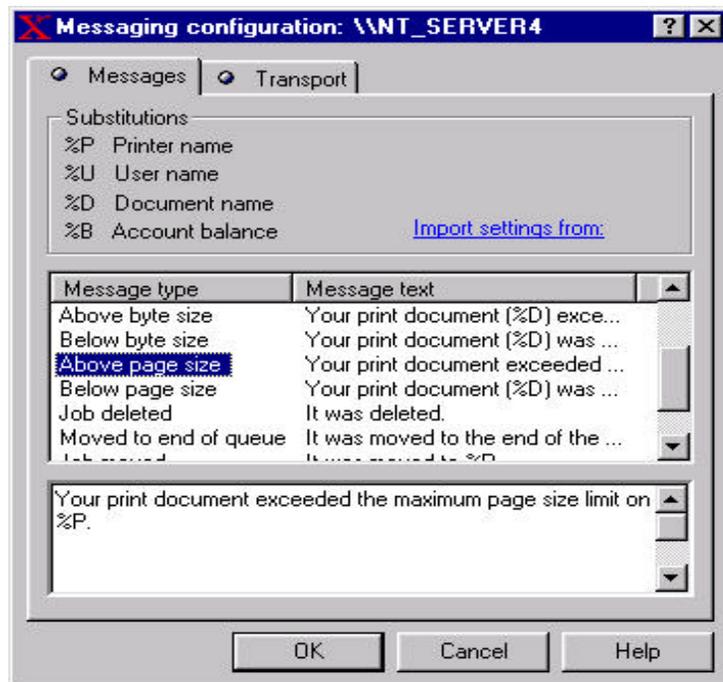
- Never
- After each print job
- If balance is less than or equal to the low balance limit
- If balance goes below a specified limit

The message that is sent to user may be customized to meet specific requirements by entering the message in the edit window.

**Note:** Ensure that the data service is re-started after any configuration changes are made.

## Messages

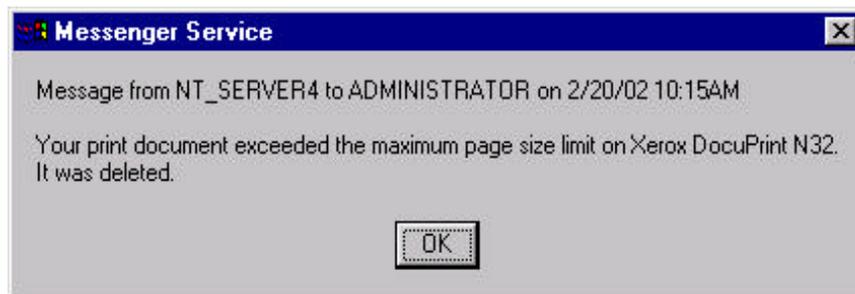
Custom broadcast messages can be configured and sent to the user when XCounter acts on rules or other events, such as when an invalid paper size is sent to a printer.



These messages can be edited in the edit window to meet custom requirements. By utilizing the substitution parameters such as printer name, user name, document name and account balance, these user messages can be made to appear more personal and informative. When a job rule is acted on, then two message settings are combined into one message - one for the rule itself, and one for the action that was taken. For example, if the action taken on exceeding the page size limit is to delete the job, the following two messages are combined and sent to the user.

- The above page size message = "Your print document exceeded the maximum page size limit on %P."
- The job deleted message = "It was deleted."

The combined message that would be sent to the user would be

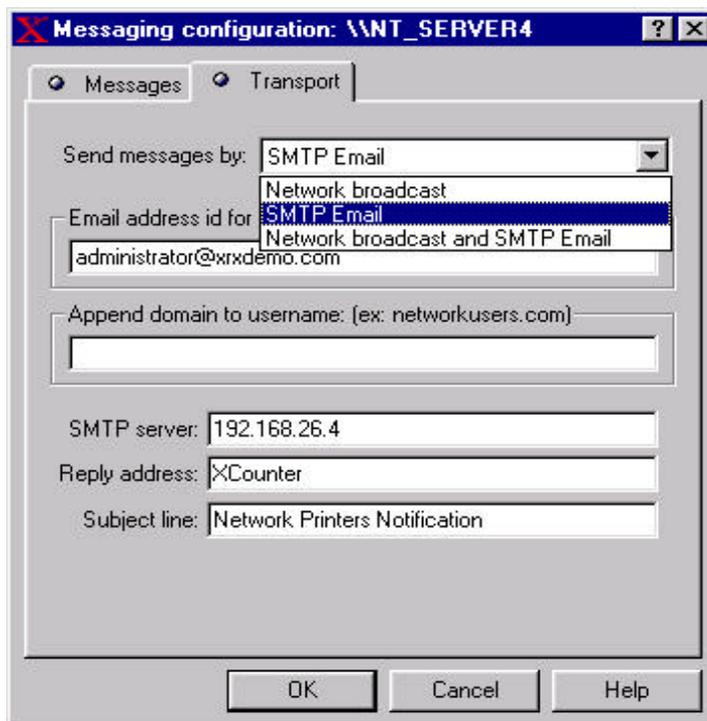


---

## Message Transport

---

The printer notification messages can be sent via network broadcast, email or both. These messages will be sent to the logged on user and/or to the email address specified.



- Send message by- Network broadcast, SMTP Mail or both Network broadcast and SMTP mail.
- Email address ID for sending- Is the address that is used as identification to the SMTP server.
- Append domain to username (optional)- The domain is added to the end of the username before sending. For example, if a username is joe.accounting.company and the domain is company.com, then the full email address to which messages are sent will be joe@company.com. Appending a domain may not be necessary if the SMTP server relays messages to local usernames.
- Reply address- If users are to be able to reply to XCounter email messages, then enter a valid email address for replies.
- Subject line- enter an optional email subject, such as "Printer notification message". If left blank, the document name will be used.

---

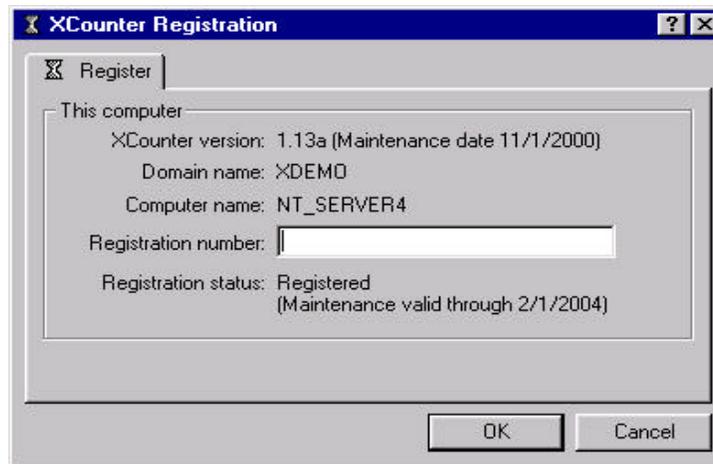
## Default printer configuration

---

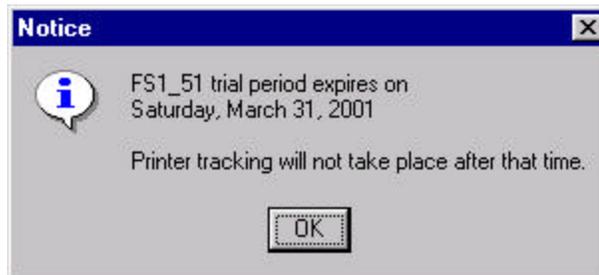
All printers can be individually configured for XCounter. However, if there are multiple printers that require monitoring, and all printers are using the same XCounter configuration, then a global default printer configuration would be optimum for setting up existing as well as future printers. When XCounter loads, it looks for a printer's individual configuration. If one is not found, then it uses the server's default printer configuration. If the default configuration has not been saved, then XCounter uses the following default settings:

<b>Accounting:</b>	<b>Log file only</b>
<b>Action if below low balance limit:</b>	<b>Print Job anyway</b>
<b>Banner (Separator) template:</b>	<b>None</b>
<b>Duplex handling:</b>	<b>Ignore</b>
<b>Pause all jobs:</b>	<b>No</b>
<b>Include banner in page count:</b>	<b>Disabled</b>
<b>Disable print notification:</b>	<b>Disabled</b>
<b>Allow unknown users to print:</b>	<b>Enabled</b>
<b>Reject job types:</b>	<b>None</b>
<b>Enable popup window:</b>	<b>Disabled</b>
<b>All prices:</b>	<b>Zero</b>
<b>All paper sizes:</b>	<b>Enabled</b>
<b>Plotter area accounting:</b>	<b>Disabled</b>
<b>Charge per job:</b>	<b>Disabled</b>
<b>Default size:</b>	<b>Letter</b>
<b>Rules:</b>	<b>None</b>

## Trial Period



If XCounter is to be run in the 60-day trial period mode, the time clock starts when the printer service is first loaded. During this trial period, the following type of reminder message will be displayed each time XControl is started.



After the 60-day trial period has expired, it will become necessary to purchase and obtain a password from Xerox to enable XCounter to function. XCounter software cannot be re-loaded on a server that the time period has expired.

**Note:** It will not be possible to extend this time period passed the sixty days.

## Information Required for Registration

When registering XCounter for NT, the “Domain name” and “Server name” for each server, on which XCounter will be loaded, will be required before the registration number(s) can be obtained.

If a demo version of XCounter is already installed this information can be obtained from the “Registration and Trial period” screen found from within XControl server configuration. (See the above registration screen for this required information)

## Registering XCounter

To register XCounter a registration number must be obtained from Xerox.

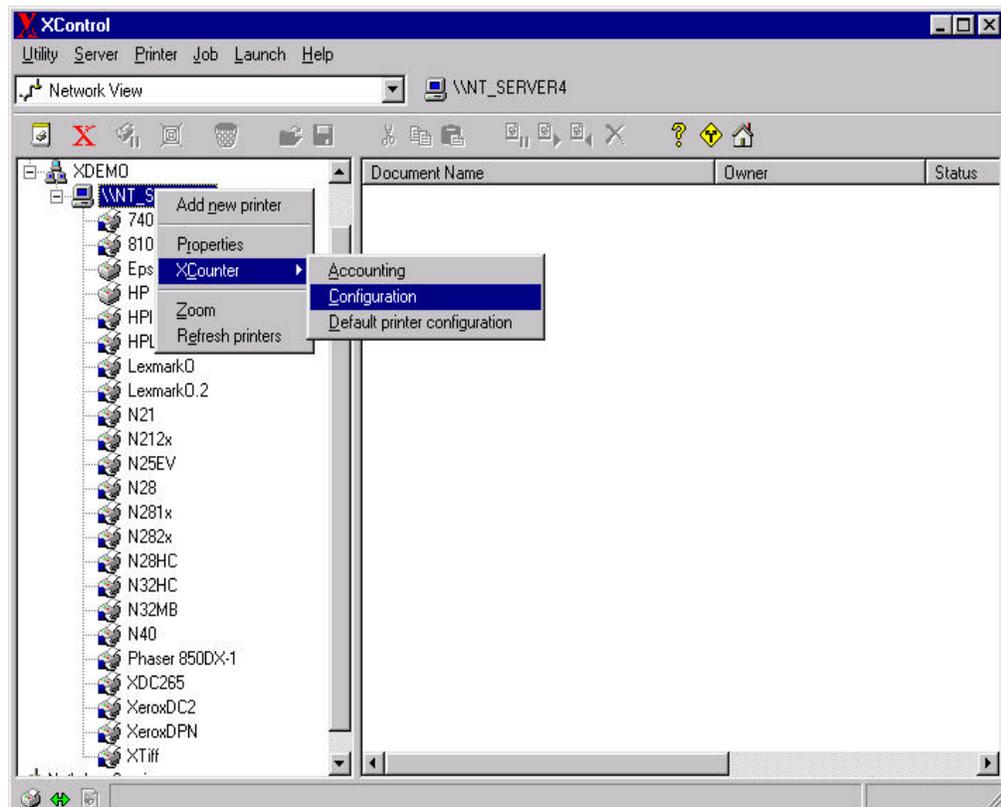
**Please contact the your Xerox sales person to purchase and obtain the XCounter registration number.**

When registering XCounter for NT, the domain name and server name on which XCounter will be loaded will be required before the registration number is generated. When applied, the registration number will unlock XCounter for unlimited use on the server that was registered. (Refer to the section on “Information Required to Obtain Password” for more information)

**Note:** The XCounter registration password locks XCounter to the registered print server. The same password cannot be used to install XCounter on a server with a different server name and/or domain name.

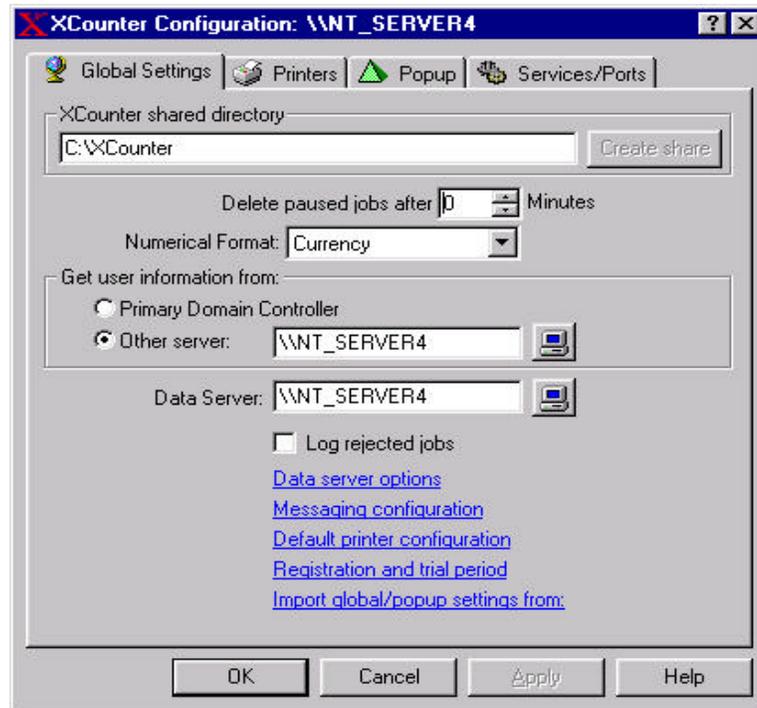
The following procedure will register XCounter:

- After receiving the registration number from Xerox, start “**XControl**”

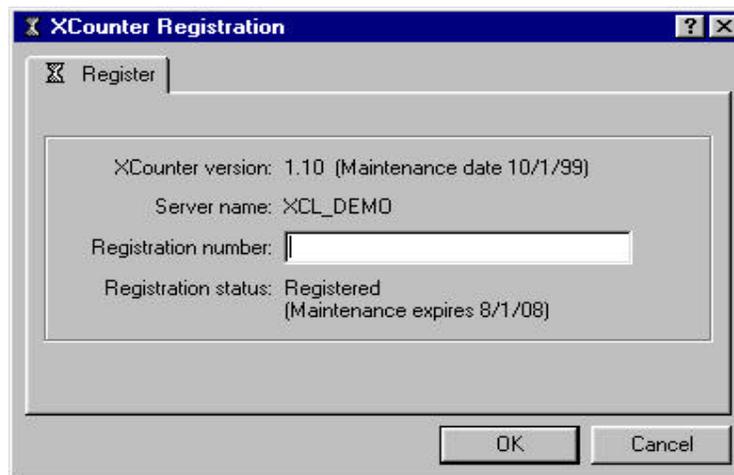


From the network view select the server that XCounter is installed on.

- Select the red “X” on the tool bar or right mouse button XCounter\configuration.



- The XCounter configuration screen will appear.
- Select the “**Registration and trial period**” link at the bottom right corner of the configuration screen.
- The XCounter Registration screen will appear.



- Enter the registration number in the space provided and press “**OK**”.
- The Registration status will change to “**Registered**”.

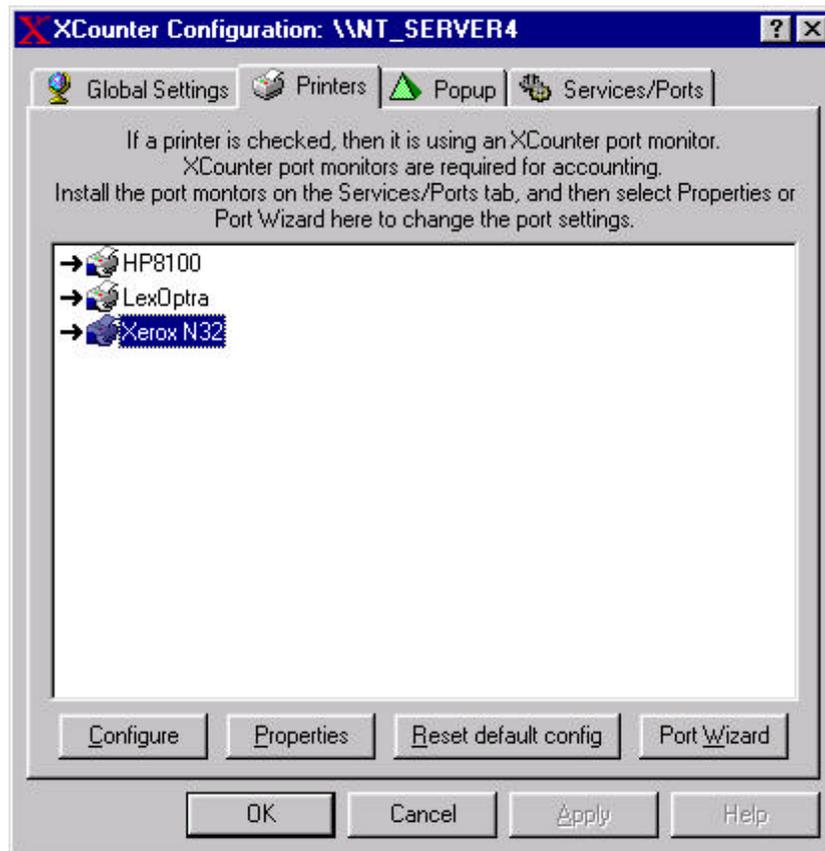
The XCounter Registration screen will show the expiry date of the maintenance contract if purchased.

## Import global popup settings

If multiple servers are to be configured on the network, configuration settings can be imported from other installed XCounter servers. This process can reduce the time when installing new XCounter servers. When “ Import global/popup setting from” is selected, a server window is opened. By selecting an installed XCounter server, the configuration settings from that server are copied to the server being installed.

## Printers

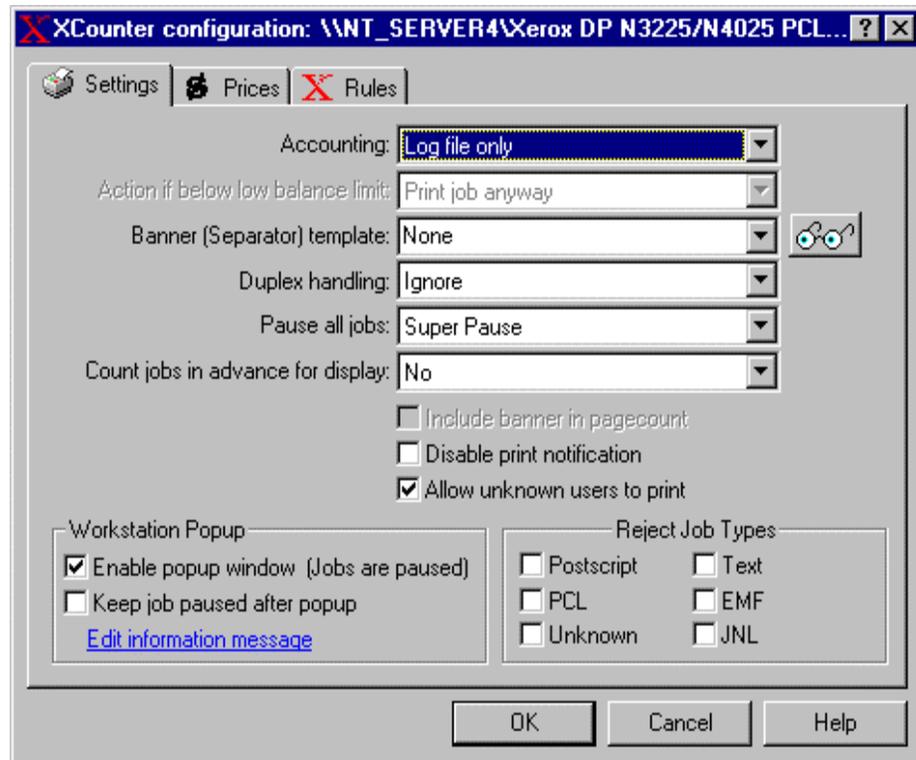
- Launch XControl from the Start/Programs/XCounter for NT menu.
- From the graphic interface select Domain/Server on which XCounter is installed and press the “X” button on the tool bar and select the “Printers” tab.



The printer display window shows all printers connected with the server. A black arrow pointing at a printer, indicates that XCounter is attached and monitoring that printer. This window contains configuration buttons that allows the administrator to:

- Configure- This button launches the XCounter printer configuration settings.
- Properties- This button launches the Windows printer driver settings.
- Reset default config- This button resets XCounter printer queue information to the default setting.
- Port Wizard- This button launches the XCounter port wizard that will assist the administrator when attaching the XCounter port monitors to installed printers.

## Printer configuration



## Accounting

None:	No page counting enabled for this printer
Log file only:	Counts pages, maintains log file, no user account balances
User account balances and log file:	Counts pages, maintains log file, and user account balances

## If below low balance limit

If a user whose balance is below their low balance limit submits a print job, XCounter can:

- Print job anyway
- Delete job
- Pause job

---

## Banner (Separator) Template

---

Optionally, XCounter may be configured to send a customized banner with the print job. Select from the following banner templates.

- **None:** No banner printed
- **PCL4 (Letter):** HP LaserJet Series II or equivalent - letter size paper
- **PCL5 (Letter):** HP LaserJet III or equivalent - letter size paper
- **PCL5/PJL (Letter):** HP LaserJet 4 or equivalent - letter size paper
- **Postscript (Letter):** Any Postscript printer - letter size paper
- **PCL4 (A4):** HP LaserJet Series II or equivalent - A4 size paper
- **PCL5 (A4):** HP LaserJet III or equivalent - A4 size paper
- **PCL5/PJL (A4):** HP LaserJet 4 or equivalent - A4 size paper
- **Postscript (A4):** Any Postscript printer - A4 size paper

---

## Duplex Handling

---

XCounter has two options for handling duplex printing. If the printer driver is configured for duplex printing, and a print job is sent to the printer, XCounter can either account for all pages sent to the printer or divide the page count in half. The two options are as follows:

- **Ignore-** XCounter will leave the page count alone.
- **Divide page count in half-** XCounter will check for duplex print jobs in the data stream and divide the total page count by 2.

XCounter detects duplex printing from print data stream sent to the printer. If the printer hardware is setup to print duplex by default, and a print job contains no information about duplex data, then XCounter will not detect a duplex print job. The printer hardware must be setup to print single-sided by default and allow users to specify duplex options using printer drivers.

---

## Pause all jobs

---

XCounter can pause all jobs automatically. Users will have to release each job in order for them to be printed - this can be done from the Explorer Printers list or Print Manager.

- **Standard pause:** XCounter pauses the job in the usual manner.

- **Super pause:** This is a propriety XCounter function that holds a print job until released by the XPopup program that is normally loaded on the user workstation. Normal users will not be able to resume a print job without the XPopup program loaded.

Use Standard pause, to prevent users from resuming their own print jobs that have been paused by XCounter by setting certain security attributes of the printer. The CREATOR/OWNER object, users, and any groups in question must have only Print permission. Any users with only Print permission cannot delete, pause, or resume any print jobs. However, all job document names will likely only be called "Remote down level document", which is not very descriptive. This is a limitation of Windows NT. Also, in some instances, jobs are not removed from the print queue after they have been printed, and have to be deleted manually.

Therefore, it's better to use **Super pause** and give CREATOR/OWNER Manage Documents permission. This way, the job document names will appear as they should, and users will not be able to resume their jobs.

---

## Count jobs in advance for display

---

When this option is selected, XCounter will display the actual page count and the cost of the job, if selected, in the XControl window. If the client XPopup is utilized, this page count and cost information is also displayed at the client workstation in the XPopup window. The following three options may be selected:

- None                      Advance page count is disabled
- Slower                     Advance page count is enabled.  
**Note:** A slower performance of the XPopup program may be encountered depending on the server hardware being used.
- Faster                     Advance page count is enabled.

**Note:** An increase in CPU utilization may be encountered depending on the print job size, and/or the type of server hardware used.

---

## Include banner in page count

---

When this option is selected, XCounter adds the banner page to the total page count. If this option is not selected, XCounter does not include the banner in the total page count.

---

## Disable print notification

---

When this option is selected, XCounter will clear the Notify name from the print job configuration.

---

## Allow unknown users to print

---

If the server is handling print jobs from other platforms (such as Macintosh or Unix) where users are not required to logon to the server in order to print, it is possible that the print job owner name cannot be found in the NT account database. Leave this box unchecked if XCounter is to reject and delete these jobs. If XCounter has been configured to delete jobs from unknown users, an "Error getting user information" entry will be written to the NT application event log. Otherwise the job will be logged in the XCounter.log file as a member of the \***Unknown** domain.

---

## Enable popup window

---

Selecting this option enables XPopup to issue a popup window on the client workstation. This allows users to enter additional information to be logged pertaining to the job, such as client/matter numbers, job codes, or shared login accounting. This option requires that print jobs be placed on "Super Pause" in order to prevent users from releasing the print job using other utilities, such as Print Manager or Explorer printer lists.

---

## Keep job paused after popup

---

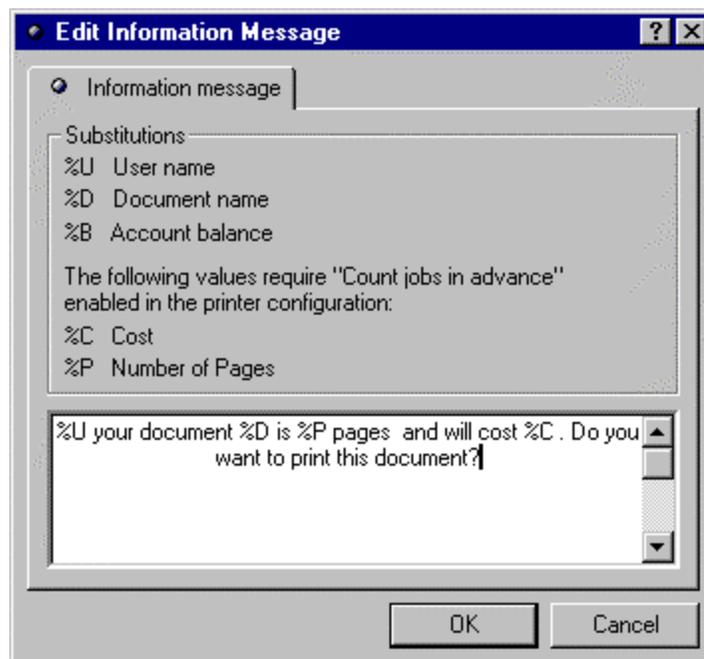
This option when selected, will retain the super pause function on the print job until it is manually released.

---

## Edit information message

---

The XPopup window can be configured to display a custom message for each printer. This information may be also customized using substitution parameters for individual a user. If XPopup is enabled, the information typed into the edit window will be displayed in the XPopup window at the user workstation.



**Note:** This option is useful in situations where different displayed information is required for each printer or user.

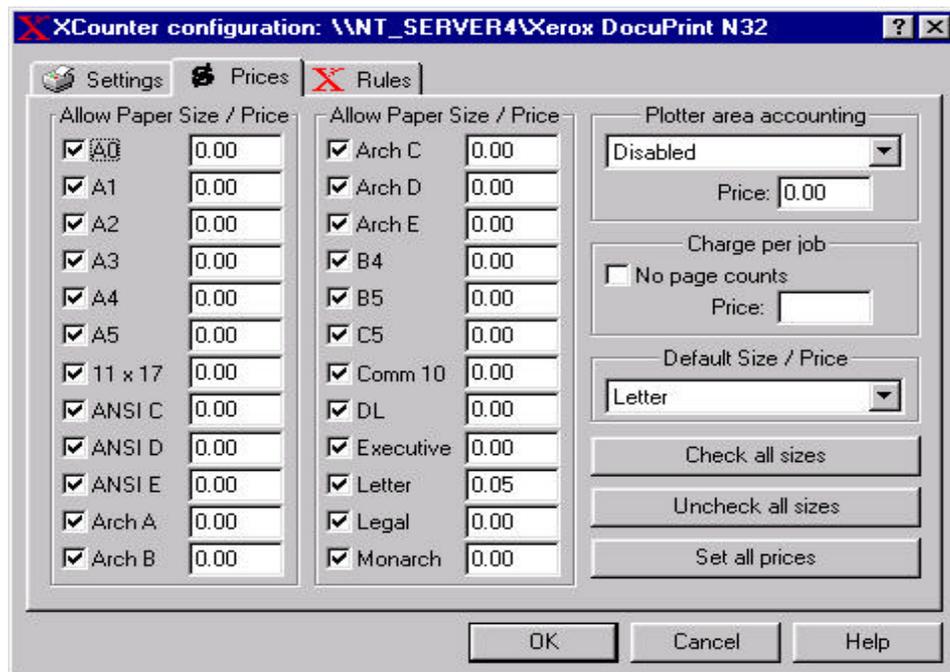
## Reject job types

Most printer manufacturers today offer both Postscript and PCL resident on the printer. However, this does not mean that all printers support multiple Printer Description languages (PDL's). When an unsupported PDL job is sent to a printer, undesirable results usually occur in the form of large amounts of unreadable printed output. To prevent this from happening, XCounter can be configured to reject/delete the print job and notify the user of such action. Any combination of the following PDL's can be accepted or rejected/deleted:

- **PostScript**
- **PCL**
- **Unknown** (RAW data types)
- **Text**
- **EMF** (Microsoft Enhanced Metafile)
- **JNL** (data types)

**Note:** An Unknown print job typically occurs when a user sends a binary data file to a printer, or if XCounter can't recognize a printer language such as Epson ESC/P2. If an Unknown print job is not rejected, it will be counted as a plain Text job.

## Prices



Each printer has multiple per-page prices that refer to a number of commonly used paper sizes. A check box will be seen for each paper size (allow paper size) and a price entry field.

To allow jobs to use a particular paper size, check its corresponding box.

To associate a cost per page, enter a price to charge for each page that prints with that paper size. To track pages printed, and disregard cost totals, leave prices at zero.

If the price value is negative, XCounter will add the number of pages in each print job (multiplied by the per-page price) to the user's account balance, otherwise XCounter will subtract the number of pages in each print job (multiplied by the per-page price) from the user's account balance.

Any print job using a paper size, which is unchecked, will be deleted, and a broadcast message will be sent to the user who submitted the job. This prevents users from requesting a paper size not supported or used by a particular printer, such as an A4 job on a letter sized printer - which would cause the printer to pause.

**Note:** XCounter's Postscript paper size detection works best on drivers that use Level 2 features. They are present in the standard drivers that ship with Windows 95/98/ME and NT/2000. In Windows 3.x they are present in the Adobe PS 2.x and 3.x drivers. On the Macintosh, they are present in the LaserWriter 8.x and PS Printer drivers. If support for only one paper size is required, then this shouldn't be a concern.

---

## Plotter area accounting

---

This option when enabled allows plotters supporting either a Postscript or HPGL2 PDL to track costs by square foot or square meter.

---

## Charge Per Job

---

By setting the Charge Per Job field, this will override all paper size prices and charge one price for all jobs that print on the printer. No pages will be counted. This setting is useful for devices such as pen plotters using unsupported page count languages such as HPGL.

---

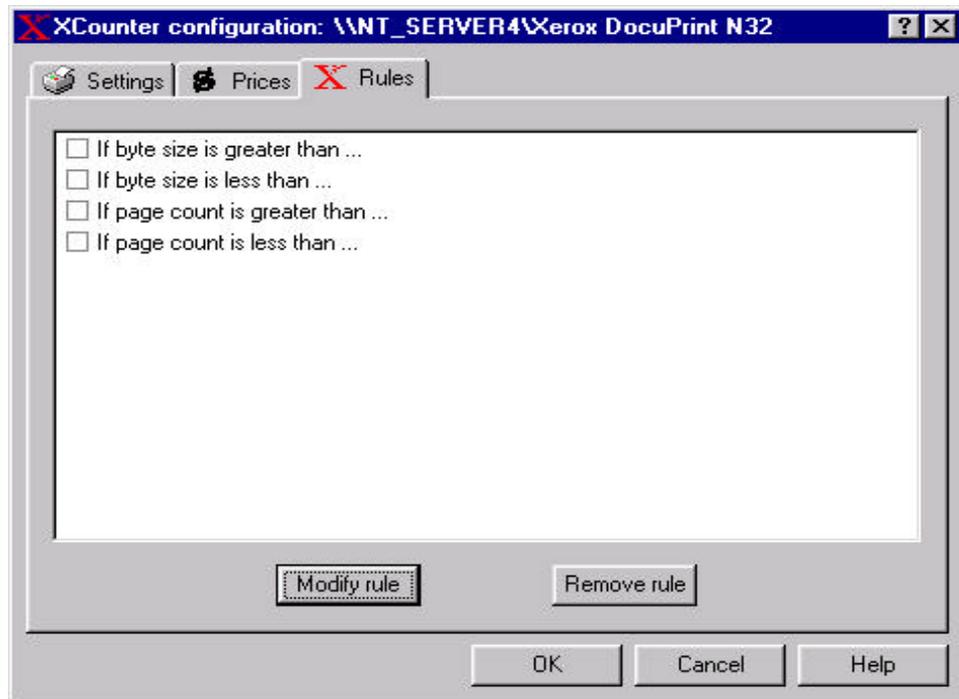
## Default Size/Price

---

In cases where the paper size cannot be determined, such as plain text print jobs or printer drivers which perform minimal page formatting, this (required) setting will select which paper size price to use.

XCounter's Postscript paper size detection works best on drivers that use Level 2 features. They are present in the standard drivers that ship with Windows 95/98 and NT. In Windows 3.x they are present in the Adobe PS 2.x and 3.x drivers. On the Macintosh they are present in the LaserWriter 8.x and PS Printer drivers. If only one paper size is supported, then this shouldn't be a concern.

## Print Job Rules

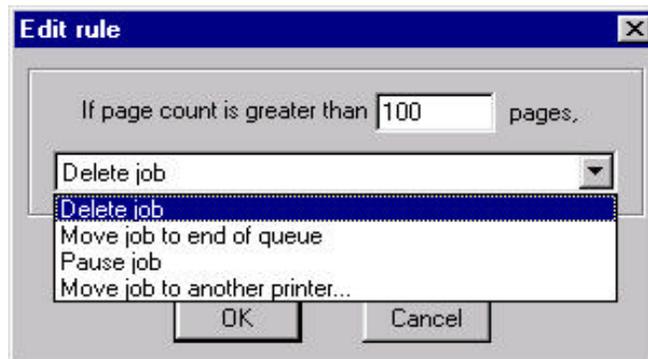


XCounter's print job rules allows defined actions to be taken on prints jobs sent to network-attached printers. These print job rules are as follows:

- If byte size is greater than a specified amount, then an action can be performed.
- If byte size is less than a specified amount, then an action can be performed.
- If page count is greater than a specified amount, then an action can be performed.
- If page count is less than a specified amount, then an action can be performed.

## Print Job Rule Actions

The following predefined actions can be associated the print job rules.



- Delete job
- Move job to end of queue - if smaller jobs are to be printed before larger jobs, XCounter can move the larger jobs to the end. However, jobs will only be moved once to the end of the queue.
- Move job to another printer.

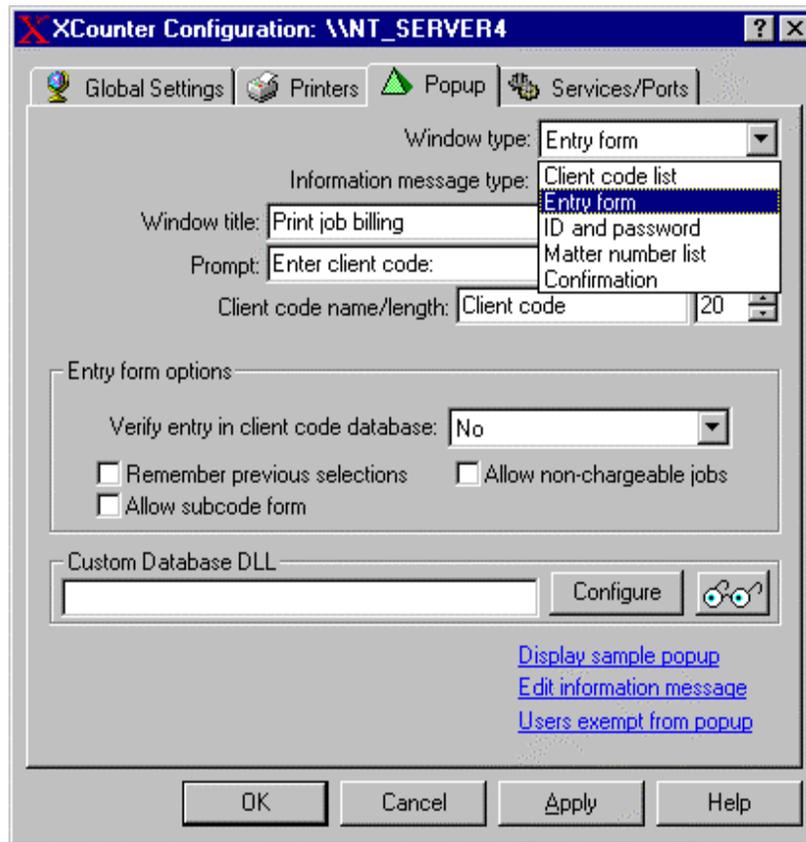
**Note:** When jobs are moved to another printer, the following limitations apply:

- If jobs are printing using the RAW data type, ensure that the printer drivers are compatible.
- Watch that rules on multiple printers don't result in jobs moving back and forth between printers. Be certain that if a job is moved to another printer, that the destination printer's rules will allow it to print.
- Ensure that users have permission to print to the destination printer. If the user does not have permission, then the job will not be moved.

## XPopup Server Configuration

Launch XControl from the Start/Programs/XCounter for NT menu.

From the graphic interface select Domain/Server on which XCounter is to be installed and press the "X" button on the tool bar and select the Popup tab.



This configuration window allows the administrator to customize the functionality as well as the visual presentation of the client XPopup program on the client workstation. XCounter provides five types of client popup window configurations. These window types have unique options associated to the window type selected.

- Client code list            The user is presented with a pre-configured list of client codes which when selected, are logged and stored in the xcounter.log file.
  
- Entry form                The user is presented with a generic form where they may type in any client code desired. This information is logged and stored in the xcounter.log file. If using client code and subcode, they must be separated by a “/” character, for example razzl/eng All information before the “/” will be placed in the client code field of xcounter.log; everything after the “/” will be placed in the subcode field of xcounter.log .
  
- ID and password           The user is presented with a logon dialog box requiring a valid user ID and password. This ID and password can be either configured to accept a network logon ID and password or to check the PrinterPopupUsers database for a valid ID and password. This window type is usually used with shared logon printer accounting.
  
- Matter number list        The user is presented with a pre-configured list of client/sub codes. This is similar to the client code list except that the database is 2-dimensional. Each client code can have an associated list of subcodes (matter numbers). When user selects a client code, the relevant subcode/s are displayed.
  
- Confirmation             The user is presented with an information window and a confirmation “Print it” or “Cancel” function.

---

## XPopup - Information Message Type

---

XCounter can be configured to include an optional information message in the XPopup window. This information window can be associated to individual printers or globally to all printers. Select the “Edit information message” link to compose the global printer message. Select the “Edit information message” link in the printer configuration to compose the individual printer message.

**Note:** This message window is not available when using the “Matter number list” window type.

---

## XPopup - Window Title/Prompt

---

The popup window title and prompt (for the client code) can be configured to display information to meet end user requirements. A sample XPopup window may be viewed from the Popup configuration window.

---

## XPopup - Client Code and Subcode Naming

---

If the XPopup is to refer to the client code and subcode using different terminology, such as “Job numbers” or “Matter numbers”, enter them here. The total length of client code and subcode is limited to 20 characters for each field.

---

## XPopup – Client code/Matter code list Options

---

- Client code only from list

If this box is checked, then the user must select a client code from the list, or type in a code manually. However, if the manually typed in client code is not in the list, the job will not print. If the matter list window type is enabled, then sub code can either be selected from the list or any alpha/numeric information typed in.
- Subcode only from list

If this box is checked, then the user must select both a client code and a subcode from the list, or type in codes manually. However, if the manually typed in client code is not in the list, the job will not print.
- Associate client codes with

If this box is checked, then the network user and group names user and group names client/sub codes will be associated to the user/groups as defined in XManager. This option is used to specify which client/sub codes are displayed within XPopup to each user.
- Remember previous selections

If this box is checked then the client popup window will retain the last 20 entries for quick retrieval. If this box is unchecked then the client XPopup window will not retain any entries.
- Allow non-chargeable jobs

If this box is checked then a printer with defined prices, will print the job with a 0.00 cost in the “Cost” field of the xcounter.log file. However, an entry of “NB=cost of job” in the “Features” field will be included for accounting purposes.

---

## XPopup - Entry form Options

---

- Remember previous selections  
If this box is checked then the client popup window will retain the last 20 entries for quick retrieval. If this box is unchecked then the client XPopup window will not retain any entries.
- Allow subcode form  
If this box is checked then the client may type up to 20 alpha numeric characters in a subcode box provided in XPopup program. This information is then logged.
- Allow non-chargeable jobs  
If this box is checked then a printer with defined prices, will print the job with a 0.00 cost in the "Cost" field of the xcounter.log file. However, an entry of "NB=cost of job" in the "Features" field will be included for accounting purposes.
- Verify entry in client code database  
If this option is enabled, then the client code as entered into the XPopup window is verified. If an incorrect value is entered into the XPopup window, an error will occur preventing the print job from printing. There are two XPopup display modes associated to this option. The "Normal" mode will display characters as they are typed. The "Display as password" mode will display an asterisk \* for each character typed.

---

## XPopup – ID and password Options

---

- Allow network passwords  
If this box is checked then both the internal XCounter user database as well as network user ID and password can be used to authenticate users for printing. If this box is not checked then only the internal XCounter user database will be used for authentication.

---

## Custom Database/Authentication DLL

---

XCounter provides an internal database for the client/matter codes or user authentication information. This internal database functions very well in most situations, however, the need may arise that would require XCounter to be attached to an existing customer database. XCounter provides this program hook area for a custom written DLL file that can be used to attach the XPopup.exe to an alternate database. This alternate database can be used for client/matter or a user authentication. Please contact Xerox for further information regarding this custom DLL.

---

## Display sample

---

This tool allows the administrator to test the XPopup for type and customized look. Any parameters or descriptions changed on the XPopup configuration screen will be displayed on the sample popup.

---

## Edit informational message

---

XCounter can be configured to include an optional information message in the XPopup window. This area will allow the administrator to edit the global message sent to the all clients that print on printers configured to use the XPopup program. By using the substitution parameters the information message may be customized for a more personalized message.

To configure a message for an individual printer, ensure that the informational message type is set to "Individual printers" and select the "Edit information message" link in the printer configuration. This type of informational message will utilize the same subsection parameters as the global message but will only send the informational message when that printer is selected.

**Note:** This message window is not available when using the "Matter number list" window type.

---

## XPopup - Users Exempt From Popup

---

When a queue is configured to support an XPopup window, all jobs will be automatically placed on hold. Print jobs from certain users may be required to be excluded from this pause condition, such as an incoming print job from a fax server. If the fax server software is logging into the network using a specified user account, then add this user to this list. XCounter will not pause the job, so that it can print without user intervention. XCounter will still track the print job, but the client code and subcode fields will be empty in the xcounter.log file.

---

# Accounting

---

---

## User Account Balances

---

This section primarily deals with credit/debit type accounting. This type of accounting is used when the tracking, monitoring and enforcing of print quotas is required. When using this type of accounting, ensure that the option, "Accounting" in the printer configuration is set to "Account balances and Log file" otherwise, set it at "Log file only" for Standard Page Accounting.

User account balances are stored in a database on the computer designated as the Data Server in the \\DataServer\XCounter\Data directory. It is not necessary for all users to logon to this computer, it is just the area where the information is stored.

---

## Numerical Format

---

- **Pages** -One accounting unit = One page. Use this option to allocate printing quotas in number of pages.
- **Currency** -Accounting is kept in terms of local currency. Use this option to allocate printing quotas in terms of currency.

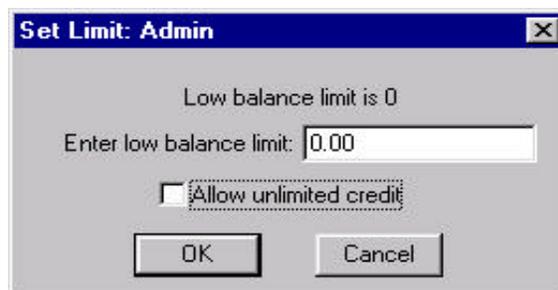
Accounting is kept in terms of local currency. The type and format of the local currency is determined from the local Windows settings.

---

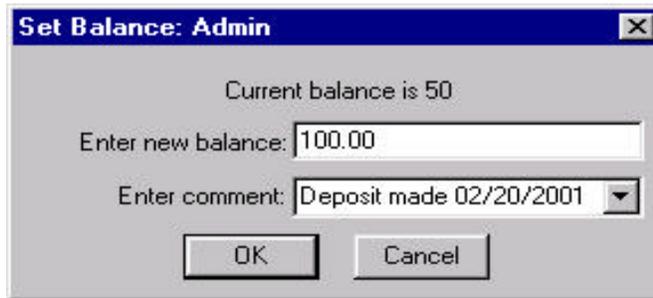
## Account Balances and Low Balance Limits

---

Each user gets an account balance and a low balance limit. The low balance limit is the minimum allowable account balance before printing access can be denied. Typically the low balance limit should be zero, unlimited credit to special users can be enabled when using this option.



XManager also provides a means by which the administrator can deposit, charge or set the balance of the user or group account. These administration windows also provide a comment area for documenting account activity that is then logged for future reference.



The per-page cost for each print job is defined in the printer's configuration. If collecting money for printing, and the deduction of the cost of each print job from a user's account balance is required, then positive prices should be used. Negative prices should be used to keep a running total of print activity in the user account balances.

If in the printer configuration window, "Accounting=User account balances and log file" is selected, then XCounter will maintain user account balances. For each print job, the account balance is charged (the number of pages printed) X (the paper size price). When this option is set in the printer configuration, there are three pre-defined actions that may be set when the low balance limit is set.

- Print Job anyway- This option will allow printing of the job even if there is insufficient credit in the user/group account.
- Delete job- This option will delete the print job and notify user of the action taken.
- Pause job- This option will place the print job on hold and notify the user of the action taken. The administrator may only release this job.

<b>If paper size price is:</b>	<b>Then XCounter:</b>	<b>And low balance limit must be:</b>
<b>Greater than 0</b>	<b>Subtracts from the balance</b>	<b>Less than the balance</b>
<b>Less than 0</b>	<b>Adds to the balance</b>	<b>Greater than the balance</b>

If NT users are logging on normally, there is no need to create special printing accounts for them. However, if an XCounter account balance entry does not exist for a user, then both the account balance and low balance limit for that user are assumed to be zero. Therefore, if user balances are to start at zero, it is not necessary to set the balances for new users.

If shared logon printer accounting is used, where users do not have their own accounts, please read the shared logon section in the Popup chapter.

---

## **XCounter.log File**

---

XCounter keeps the log of all print activity in the xcounter.log file. This file is located in \\DataServer\XCounter\Data\ xcounter.log. Users using XManager should be granted Read/Write privileges in the directory where xcounter.log is stored.

The xcounter.log is written in ASCII delimited format. XManager generates reports and print histories by reading this file. The log file can also be imported it into a spreadsheet, report writer or database program for more detailed analysis.

---

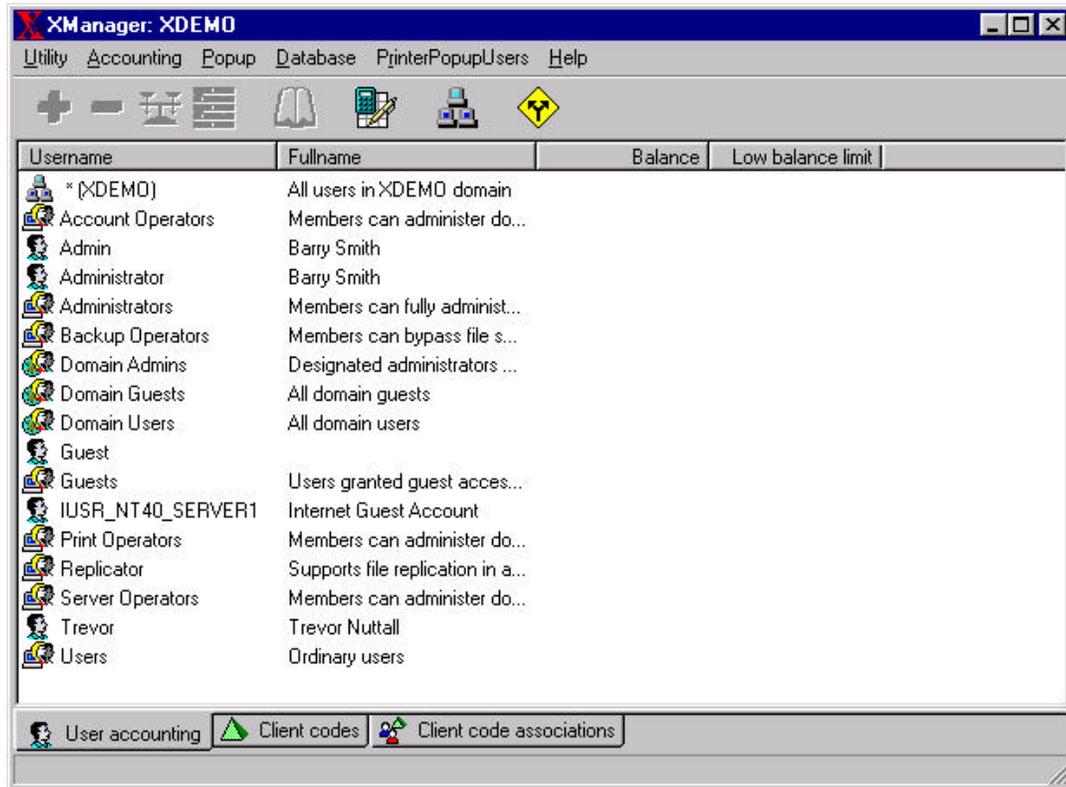
### **ASCII Delimited Field Names:**

---

- DomainName\UserName- Network domain and user which submitted job
- Document name- Document name as specified by the application sending job
- Printer name- Printer name defined by network share
- Date- Date print job was submitted
- Time- Time print job was submitted
- Workstation- Computer from which printing or accounting transaction originated
- Client code- information inputted from client workstation
- Subcode- information inputted from client workstation
- Paper size- media size job was printed on
- Features- (Color/Monochrome, Duplex, Number of copies)
- Size in bytes- job size in bytes sent to the printer
- Page count- number of pages sent to printer or pages calculated by XCounter This depends on the options selected in the printer configuration. (Duplex, Banner page)
- Cost- associated page cost as specified by the printer configuration
- Account Balance- user/group account balance after print job

## XManager

XManager is a utility program for maintaining user account balances, viewing user print histories, generating printing reports and maintaining the client code database. XManager runs under Windows 95/98/Me, or NT/2000. XManager may be launched by either double clicking on the program icon or by right clicking on a selected server or domain in XControl and selecting XCounter, Accounting. Multiple instances of XManager may be run for multiple domains. XManager utilizes the file attribute rights of NT/2000 this means that only users who have Read/Write permission to the \\DataServer\XCounter\Data directory will be able to change account balances or modify the xcounter.log file.



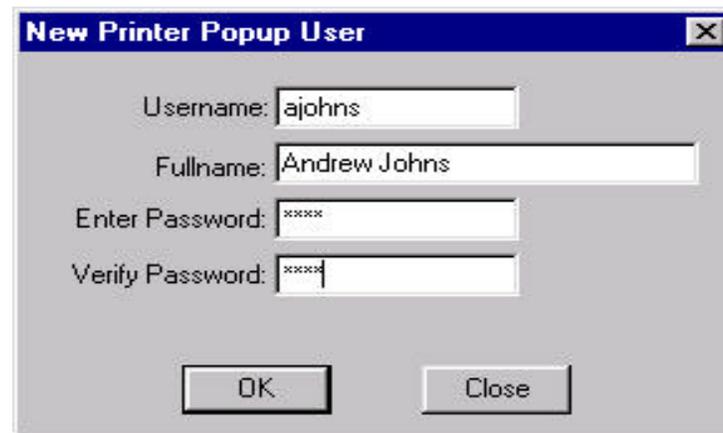
Multiple users may be selected to perform various operations. However, operations on groups may only be performed one at a time. There are four accounting functions that are associated with user/group accounting.

- Deposit- By selecting a user or group, this button allows the administrator to increment the account balance.
- Charge- By selecting a user or group, this button allows the administrator to decrement the account balance.
- Set balance- By selecting a user or group, this button allows the administrator to set the account balance to a desired amount.

- Set low balance limit- By selecting a user or group, this button allows the administrator to set the account low balance limit.

When the server and workstation are configured for XPopup and the ID/Password option is enabled, XManager will display a “PrinterPopupUsers” option menu. This menu will allow the setup of a separate user database. XCounter then creates a “PrinterPopupUsers” domain that is only available to the XManager program. This type of user database is usually used when a shared login and print tracking is required.

To select this domain, select the domain button and select “PrinterPopupUsers” To enter a new user select “New user” from the “PrinterPopupUsers” menu. The following option window will appear.



The “PrinterPopupUsers” menu contains the necessary maintenance functions to maintain this user database. All the same accounting functions (Deposit, Charge, Set Balance Set Low Balance Limit) apply to this user database as it does for the NT/2000 network users.

---

## Printer History

---

XCounter provides real time print history reports by printer, user and group. These detailed reports allow the administrator instance access to user, group or printer activity. By selecting the “Preferences” button on the XManager tool bar, the preferences may be modified to allow customization including viewer type and fields displayed. XCounter can be configured to use one of the following viewers:

- XManager viewer
- HTML Web browser
- Microsoft Excel

From within the XManager viewer, the output of the print history file can be printed, saved to disk or emailed directly via the network email system.

User	Document	Printer	Date/Time	Paper size	Features	Saw
WSPR\ohas	Microsoft Word - 63259232.01	WNYHOME\23-ERICX	09/12/2000 15:15	Letter		7071
WSPR\ohas	Microsoft Word - 63259232.01	WNYHOME\23-ERICX	09/12/2000 15:16	Letter		6502
WSPR\hoveadln	Microsoft Word - 63161690.01	WNYHOME\23-ERICX	09/12/2000 15:51	Letter		372279
WSPR\penaidln	Microsoft Word - 63120849.01	WNYHOME\23-ERICX	09/12/2000 16:06	Letter		62035
WSPR\ohas	wsinetp/116/http://www.ual.com	WNYHOME\23-ERICX	09/12/2000 16:11	Letter		55832
WSPR\uncraklmv	Microsoft Word - 63259548.02	WNYHOME\23-ERICX	09/12/2000 16:50	Letter		43702
WSPR\ipachi	Legal Research	WNYHOME\23-ERICX	09/12/2000 16:58	Letter		701594
WSPR\hoveadln	Microsoft Word - 63161690.01	WNYHOME\23-ERICX	09/12/2000 17:15	Letter		402361
WSPR\uncraklmv	http://www1.justiceink.com/webpage...	WNYHOME\23-ERICX	09/12/2000 17:21	Letter		37823
WSPR\uncraklmv	Microsoft Word - 63259528.01	WNYHOME\23-ERICX	09/12/2000 17:56	Letter		370967
WSPR\uncraklmv	Microsoft Word - 63259332.01	WNYHOME\23-ERICX	09/12/2000 18:19	Letter		287170
WSPR\penaidln	Microsoft Word - NHPov.doc	WNYHOME\23-ERICX	09/12/2000 18:23	Letter		61505
WSPR\penaidln	Microsoft Word - NHPov.doc	WNYHOME\23-ERICX	09/12/2000 18:37	Letter	/Co=10	64294
WSPR\penaidln	http://www.mls.rpc.rpus/nra/nmi/pl...	WNYHOME\23-ERICX	09/12/2000 18:50	Letter		158975
WSPR\wondm	WRT-Transcript Handler - By Wit	WNYHOME\23-ERICX	09/12/2000 19:34	Letter		12852
WSPR\uncraklmv	Microsoft Word - 63259332.01	WNYHOME\23-ERICX	09/12/2000 20:17	Letter		295619
WSPR\ohas	Microsoft Word - 63259416 v1 - Bent...	WNYHOME\23-ERICX	09/12/2000 21:12	Letter		282785
WSPR\hoveadln	Microsoft Word - 63161690.01	WNYHOME\23-ERICX	09/13/2000 10:50	Letter		407783
WSPR\ipachi	Microsoft Word - 63259423.01	WNYHOME\23-ERICX	09/13/2000 11:18	Letter	/Co=2	16744
WSPR\hoveadln	http://biz.yahoo.com/p/a/ag/M	WNYHOME\23-ERICX	09/13/2000 12:14	Letter		117628
WSPR\hoveadln	http://biz.yahoo.com/p/a/ai/Lt	WNYHOME\23-ERICX	09/13/2000 12:15	Letter		95532
WSPR\hoveadln	http://www.scoralegalclub.co	WNYHOME\23-ERICX	09/13/2000 13:26	Letter		97553
WSPR\lamsona	https://www.telecharge.com/even	WNYHOME\23-ERICX	09/13/2000 15:52	Letter		16848
WSPR\lamsona	https://www.telecharge.com/even	WNYHOME\23-ERICX	09/13/2000 15:52	Letter		17956
WSPR\lamsona	https://www.telecharge.com/even	WNYHOME\23-ERICX	09/13/2000 15:53	Letter		15276
WSPR\lamsona	Microsoft Word - 63247788.01	WNYHOME\23-ERICX	09/13/2000 16:06	Letter		55556
WSPR\lamsona	Microsoft Word - 63248252.01	WNYHOME\23-ERICX	09/13/2000 17:28	Letter		15706
WSPR\uncraklmv	Microsoft Word - Label2	WNYHOME\23-ERICX	09/13/2000 17:36	Letter		53911
WSPR\uncraklmv	Microsoft Word - 63175459.05	WNYHOME\23-ERICX	09/13/2000 18:16	Letter		2695564
WSPR\uncraklmv	Microsoft Word - 63175459.05	WNYHOME\23-ERICX	09/13/2000 18:16	Letter		40490
WSPR\uncraklmv	Microsoft Word - 63259416 v1 - Bent...	WNYHOME\23-ERICX	09/13/2000 18:16	Letter		279719

Total jobs: 6325      Total pages: 80163      Total cost: 0

- Real time printer histories may be obtained by selecting the printer in XControl, right clicking, and choosing XCounter, Print History.
- Real time printer histories, by user or group, may be obtained by running the XManager program and selecting the user or group desired and selecting print history from the tool bar.

## Creating Reports

The XManager program includes a report generator. This report generator allows reports to be customized to meet different requirements. Available reports are:

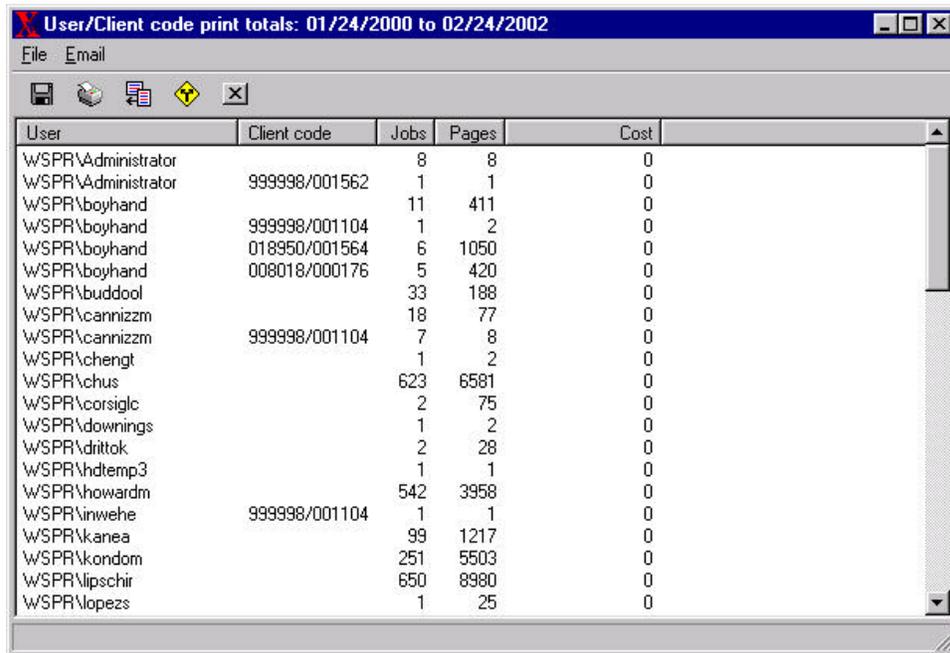
- User- printer, client code
- Printer- User, paper size, client code, hourly job usage, hourly page usage, hourly traffic Mb, daily job usage, daily page usage, daily traffic Mb, features job usage, features page usage
- Client code- user, printer
- Group- Network groups
- Deposit-

Applying a date filter to the report will allow reporting on specific dates as required. The preferences can be modified to allow customization including log file/s to be used, viewer type and fields displayed.

XCounter can be configured to use one of the following viewers:

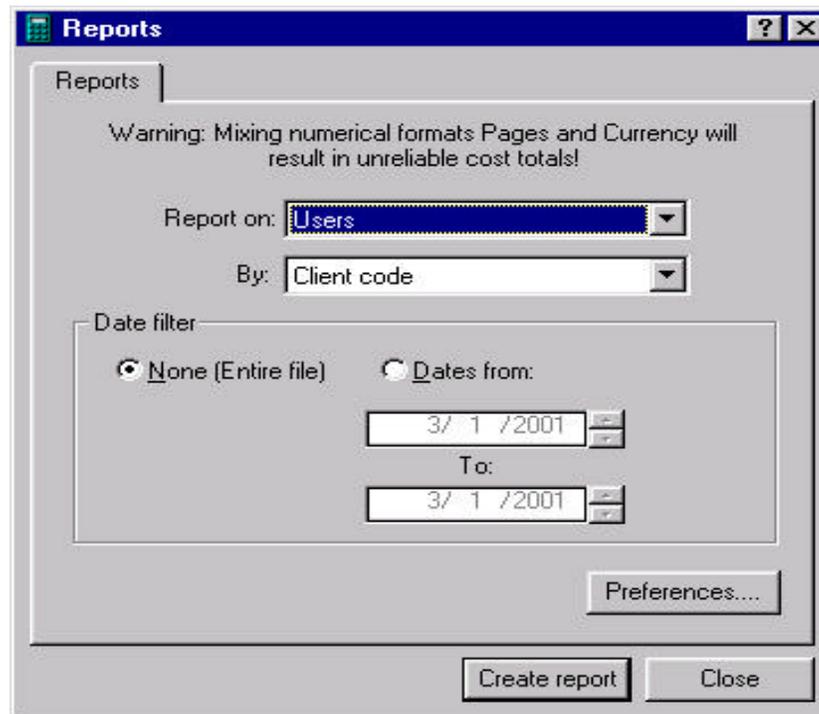
- XManager viewer
- HTML Web browser
- Microsoft Excel

From within the XManager viewer, the output of the custom reports can be printed, saved to disk or emailed directly via the network email system.



User	Client code	Jobs	Pages	Cost
WSPR\Administrator		8	8	0
WSPR\Administrator	999998/001562	1	1	0
WSPR\boyhand		11	411	0
WSPR\boyhand	999998/001104	1	2	0
WSPR\boyhand	018950/001564	6	1050	0
WSPR\boyhand	008018/000176	5	420	0
WSPR\buddool		33	188	0
WSPR\cannizm		18	77	0
WSPR\cannizm	999998/001104	7	8	0
WSPR\chengt		1	2	0
WSPR\chus		623	6581	0
WSPR\corsigl		2	75	0
WSPR\downings		1	2	0
WSPR\drittok		2	28	0
WSPR\hdtmp3		1	1	0
WSPR\howardm		542	3958	0
WSPR\inwehe	999998/001104	1	1	0
WSPR\kanea		99	1217	0
WSPR\kondom		251	5503	0
WSPR\lipschir		650	8980	0
WSPR\lopezs		1	25	0

Selecting the “Reports” button on the XManager toolbar can generate reports.



**Reports**

Warning: Mixing numerical formats Pages and Currency will result in unreliable cost totals!

Report on: Users

By: Client code

Date filter:

None (Entire file)     Dates from:

From: 3/ 1 /2001

To: 3/ 1 /2001

Preferences....

Create report    Close

A reports dialog box will appear, select the appropriate type of report and preferences desired then select “Create report”.

---

# XPopup - Print job client billing and Password Security

---

## XPopup Overview

---

To setup a Windows 95, 98/Me, or NT/2000 workstation on the network requiring XPopup support, it will be necessary to run XPopup.exe on each workstation where this feature is required. This popup allows the user to input additional information before printing will occur. This additional information is then logged. When a print job is submitted, XCounter pauses the job until the user enters the information, and then releases it.

XPopup is activated for each printer by checking the "Enable popup window" box in the XCounter printer configuration. XCounter uses Super pause automatically if XPopup is enabled.

XPopup can be used for the following applications:

- Billing print job costs to client/job numbers: The popup window prompts the user for a client code that is recorded in the XCounter.log file. XManager generates reports displaying the amounts of printing the users are doing for their clients. The client code can represent: client/matter numbers, job codes, project numbers etc.
- Identifying print jobs: The popup window is a simple form where users can type anything required.
- Password protecting print jobs: The popup window prompts the user for his/her network password. If it is correct, then the job is printed. Otherwise the job is deleted.
- Shared logon printer accounting: The popup window prompts the user for his/her network password. If it is correct, then the job is printed. Or, if it matches an account in the XCounter shared logon user database, it is printed. Otherwise, the job is deleted.
- Billing print job costs to network groups: a list of network groups to which the user belongs, and associated client codes are displayed. Users that work for different departments can allocate printing costs to the department for whom he/she is currently working.

---

## Running XPopup

---

To have XPopup automatically run when a user logs on, use the following procedure:

- Activated XPopup for each printer by checking the “Enable popup window” box in the XCounter printer configuration. XCounter uses Super pause automatically if XPopup is enabled.
- Windows 95/98/Me/NT/2000 Create a shortcut to the XPopup.exe in the Start Menu, Programs or add XPopup.exe to a login script. See section “XCounter Utilities”
- Windows NT 3.51 Add XPopup.exe to the Program Manager Startup group, or add XPopup.exe to a login script.

When running XCounter on a NT 4.0 platform, and the client workstation are utilizing Windows 95/98/Me, a separate logon account is required. This means that either the user login account or a station login account is required. For example, workstations can logon as STATION1, STATION2, etc. If everyone is logged on as GUEST, the XPopup program will not work reliably. This is a Windows NT 4.0 limitation that has been resolved in Windows 2000. The Windows 2000 server can detect the workstation name, alleviating the requirement for separate login accounts for XPopup to operate.

**Note:** The popup window will not occur if a utility other than XCounter places the job on user hold.

---

## XPopup Local Settings

---

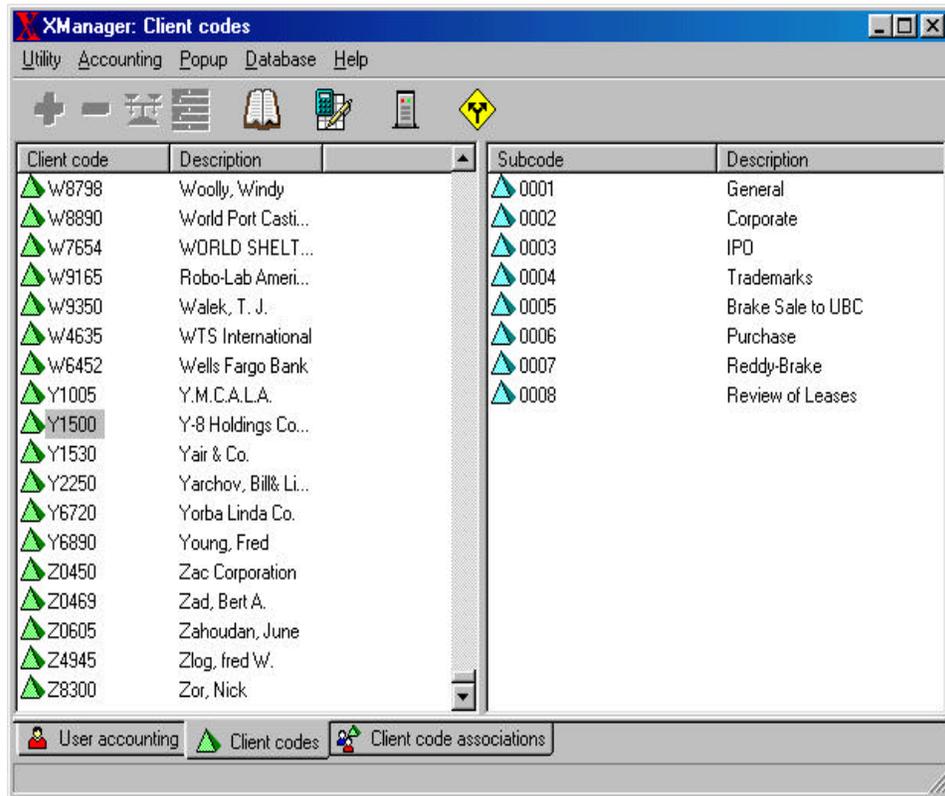
When the XPopup Preferences menu is selected, a list of servers to which printer connections have been made will be displayed. XPopup will poll each of these servers for popup jobs once per specified interval (in seconds). Each poll consists of only one RPC request. However, any servers that are not running XCounter or are hosting print queues where an XPopup window is not required can be unselected, in order to reduce network traffic.

XPopup can display in English, French, German, Spanish, Portuguese, Finnish, Dutch, Czech, Swedish, Danish and Italian.

## Maintaining the XPopup Database

The XPopup database can be updated either by using XManager or XImport.

XManager provides comprehensive tools to maintain the XPopup database. These tools allow the administrator to add new codes, delete codes, rename code, modify descriptions, remove deleted records, re-index database and import data.



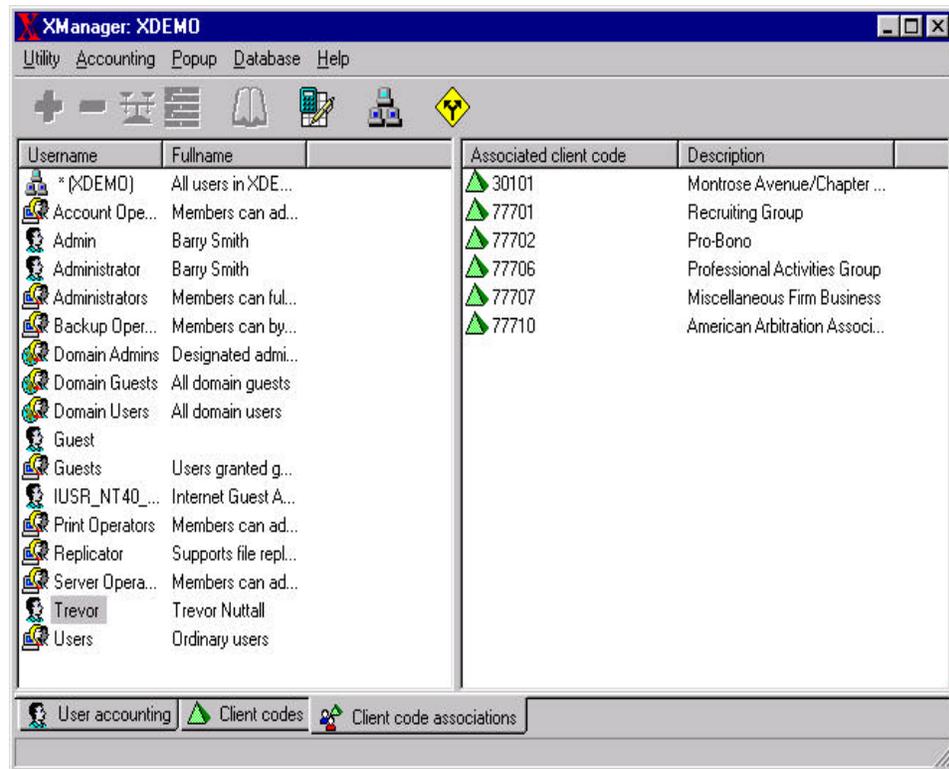
To enter the Popup maintained mode, press the green pyramid tab at the bottom of the XManager window. This will display any client codes previously entered. Selecting a client code will display all subcodes associated to that client code. If no subcodes have been established the sub code window will be blank.

Selecting the appropriate client or subcode and the selecting the popup menu will allow modifications to the client or subcode such as: adding subcode/s to the client code, deleting client or sub code, renaming client or subcode and modifying descriptions. If client codes are deleted, then all associated sub codes will also be deleted.

Select the Print History button on the tool bar to view a list of all print jobs for a particular client code.

Select Reports button on the tool bar to calculate totals for all client codes.

## Client Code Associations



This feature allows different client code lists for separate groups and/or users to be specified. Users will only see client codes that are associated with their login name or groups to which they belong. A separate database file is maintained for this purpose, called XASSOC.DBF.

In XManager, select the Client code associations tab at the bottom. A list of users and groups are shown on the left, and the associated client codes are on the right. Right-click on any object in this view for a Popup menu.

It is possible to associate multiple client codes to multiple users/groups in one operation, or cut, copy, and paste associations from one user/group to another. Client codes can also be copied from the Client codes view in XManager, and pasted into an association list. Users who belong to multiple groups will see multiple group codes and sub codes.

---

## Database Functions

---

- Remove deleted records - when client codes are deleted, the space is not reclaimed from the file. This operation compresses the file to eliminate space from deleted records and speeds up file load times, and also re-indexes the file.
- Re-index - Refreshes the index for the database files. It is recommended that the database is re-indexed after importing multiple new entries.
- Importing data - Files containing client code lists can easily be imported into xpopup.dbf. If a record already exists when importing, it will not be modified or overwritten.

---

## Importing Comma Delimited Text Files

---

The importation of client and subcodes into the xpopup.dbf file is a two-step process. The client code must be imported prior to any subcodes being imported. To import a comma-delimited file, the following syntax must be adhered to. Each record occupies a single line in the file. The format of the client code importation should be:

### **ClientCode,,Description**

- The client code is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The client code description field is optional and can be left blank. The length of this field is a maximum of 50 characters.

**Note:** The field delimiter is the “,” when using the comma delimited file format.

The format of the subcode importation should be:

### **ClientCode,Subcode,Description**

- The client code is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The subcode is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The subcode description field is optional and can be left blank. The length of this field is a maximum of 50 characters.

**Note:** Do not import a subcode record unless its associated client code record exists. It is recommended that the database be re-indexed after importing multiple records.

## Importing an Equitrac Client Number EQT File

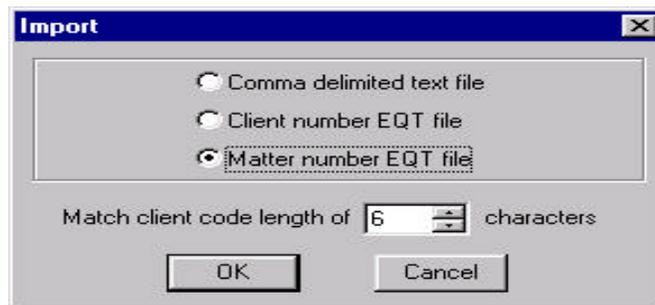
If the company is using Equitrac OneTrac system for cost control on copiers, the same data that is used at the copier terminal can be imported into XCounter. The importation of client and subcodes into the xpopup.dbf file is a two-step process. The client code must be imported prior to any subcodes being imported. To import an .eqt file into XCounter, the following syntax must be adhered to. Each record occupies a single line in the file. The format of the client code importation is as follows:

### ClientCode1=Description1

- The client code is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The client code description field is optional and can be left blank. The length of this field is a maximum of 50 characters.

**Note:** The field delimiter is the “=” when using the eqt file format.

XManager will need to know the client code field length before importing the new or modified subcodes. This information is required to separate the client code from the sub code in order to associate the subcode to the appropriate client code in the XPopup database. Ensure that this option is set correctly otherwise, the subcodes will not import it into the XPopup database.



The format of the subcode importation should be:

### ClientCode1Subcode1=Subcode Description

- The client code is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The subcode is any alphanumeric character. The length of this field is a maximum of 20 characters.
- The subcode description field is optional and can be left blank. The length of this field is a maximum of 50 characters.

**Note:** There is no delimiter between the client code and the subcode. Do not import a subcode record unless its associated client code record exists. It is recommended that the database be re-indexed after importing multiple records.

---

## Password Protecting Print Jobs

---

XPopup can be implemented to require users to enter their network logon user ID's and passwords in order to authenticate print jobs. If users are using shared logon accounts, such as GUEST or STUDENT, or if each workstation has its own logon that is being shared by users, such as STATION1 and STATION2, then XPopup can be used to require users to enter their own private user IDs and passwords in order to print jobs. To implement

Launch XControl from the Start/Programs/XCounter for NT menu.

- From the graphic interface select Domain/Server on which XCounter is to be installed and press the “X” button on the tool bar and select the Popup tab.
- Configure Window type=ID and password.
- If users are logging on with their network ID and password ensure that the “Allow network passwords” box is enabled.

If the “Allow network passwords” is enabled, XCounter will first check the user ID and password in the Windows NT user database. If that fails, it then checks in the shared user logon database. If the user ID and password fails both checks, then the print job is deleted. If the user ID and password succeed, then XCounter changes the owner of the print job to the user ID, and the job prints.

If the “Allow network passwords” is disabled, XCounter will only check the shared user database. If the user ID and password succeed, then XCounter changes the owner of the print job to the user ID, and the job prints. If the user is a shared logon user, then the user's domain is recorded in xcounter.log as PrinterPopupUsers.

---

## Shared Logon User Database

---

XCounter has a separate database that is used when a shared user logon environment is required. This database contains user name and passwords information. The maintenance procedures of this database are the same as for the NT user database. User information can be manually inputted or imported via a comma delimited text file. To import this information use the following procedure:

Select “Show users” from the “PrinterPopupUsers” menu.

Select “Import” from the database menu. A dialog box will appear allowing the location and name text file to be selected. To import this comma-delimited file, the following syntax must be adhered to. Each record occupies a single line in the file. The format of the client code importation should be:

**Username,Fullname>Password**

**Note:** Records with a matching Username will not be overwritten.

---

## XCounter Utilities

XCounter includes utilities to assist in the automation of certain administrator tasks. These utilities include XAccount.exe, XBalance.exe, XImport.exe and XPopup.exe. When correctly configured, these utilities can enhance the performance of XCounter as well as reducing administration time.

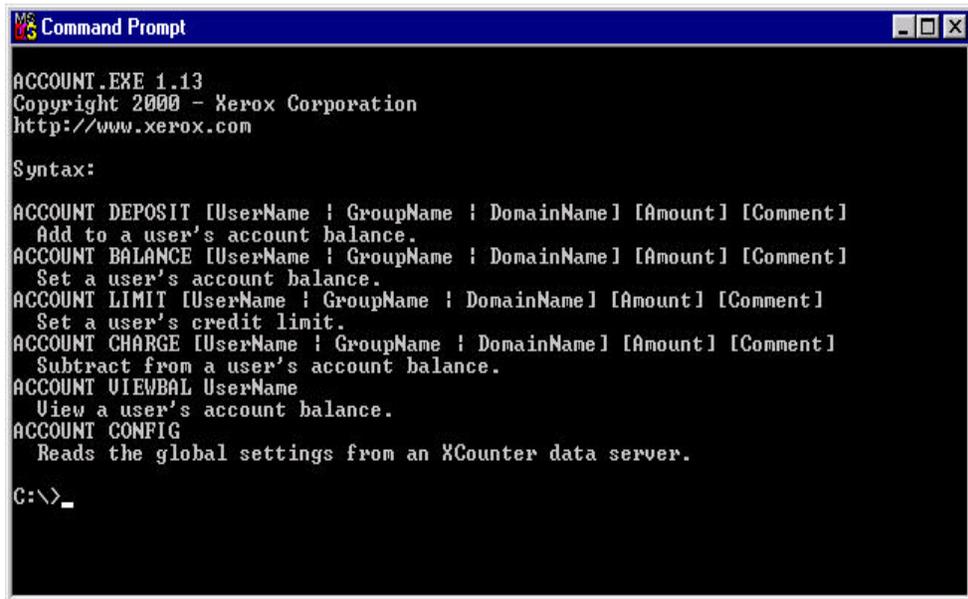
---

### XAccount.exe

---

XAccount.exe is a console command-line utility for Windows 95/98/Me NT/2000. This utility consists of six commands that can be used to type in accounting commands. By utilizing an external scheduling program, the accounting function can be automated by batch processing.

- Type **XACCOUNT** to list command-line options.



```
Command Prompt
ACCOUNT.EXE 1.13
Copyright 2000 - Xerox Corporation
http://www.xerox.com

Syntax:
ACCOUNT DEPOSIT [UserName ! GroupName ! DomainName] [Amount] [Comment]
  Add to a user's account balance.
ACCOUNT BALANCE [UserName ! GroupName ! DomainName] [Amount] [Comment]
  Set a user's account balance.
ACCOUNT LIMIT [UserName ! GroupName ! DomainName] [Amount] [Comment]
  Set a user's credit limit.
ACCOUNT CHARGE [UserName ! GroupName ! DomainName] [Amount] [Comment]
  Subtract from a user's account balance.
ACCOUNT VIEWBAL UserName
  View a user's account balance.
ACCOUNT CONFIG
  Reads the global settings from an XCounter data server.

C:\>_
```

Xaccount.exe uses the Global Settings information stored in XCounter.INI on an XCounter server.

---

## XBalance.exe

---

XBalance is a small Windows utility for users to view their account balances quickly.

XBalance requires Windows 95/98/Me NT/2000 and can be added to the Startup group or to any login script. It will update the balance display if it is left running; likewise, it will also display the balance when it is minimized.

XBalance obtains the balance information through communication with the XCounter Data Server. This connection can be configured by creating XCounter.INI in the same directory where XBalance.exe is stored. Use the following format:

[Preferences]

DataServer=\\Sales

where \\Sales is the name of the computer running the XCounter Data Server service. The double-backslash before the computer name is required.

Otherwise, the user will be asked to choose from a list of computers.

XBalance remembers the last server accessed by storing XCounter.INI in the same directory where XBalance.exe is stored. If XBalance is kept in a shared directory and unauthorized users are not to change the server setting, create XCounter.INI as shown above, and allow users only read privileges in that directory.

XBalance supports and displays the following languages English, French, German, Spanish, Portuguese, Finnish, Dutch, Czech, Swedish, Danish and Italian.

---

## XImport.exe

---

The XImport utility is a command line utility for importing and updating the XPopup database. When this utility is utilized in conjunction with an external scheduler program, the XPopup database can be automatically imported at a predefined time. The command syntax of the XImport utility is:

XIMPORT [T | C | M] IMPORTFILE EXPORTFILE.DBF

T	Text file import
C	Equitrac client number import
M=x	Equitrac matter number import x=client code length

XImport is a general utility that imports a complete database or updates an existing one. If the XPopup database is not deleted during the update process, the XImport program will not overwrite existing record data. Instead, it will only update new records, maintaining the structure to the existing XPopup database.

The following XImport sample batch file illustrates how to import a comma delimited text file into the XPopup.dbf:

```
echo off
if exist c:\xcounter\xpopup.dbf del c:\xcounter\xcounter.dbf      "deletes current Xpopup.dbf files"
if exist c:\xcounter\xpopup.cdx del c:\xcounter\xpopup.cdx      "deletes current Xpopup.cdx files"
ximport T client.txt c:\xcounter\xpopup.dbf                      "imports client file into XCounter"
ximport T matter.txt c:\xcounter\xpopup.dbf                      "imports matter file into XCounter"
```

The following XImport sample batch file illustrates how to import an EQT file: into the XPopup.dbf:

```
echo off
if exist c:\xcounter\xpopup.dbf del c:\xcounter\xcounter.dbf      "deletes current Xpopup.dbf files"
if exist c:\xcounter\xpopup.cdx del c:\xcounter\xpopup.cdx      "deletes current Xpopup.cdx files"
ximport C client.eqt c:\xcounter\xpopup.dbf                      "imports client file into XCounter"
ximport M=5 matter.eqt c:\xcounter\xpopup.dbf                    "imports matter file into XCounter"
```

---

## XPopup.exe

---

Typically XPopup should be setup to run as soon as the users login to the network. This may be accomplished by either loading XPopup.exe at startup or add a line to the system login script:

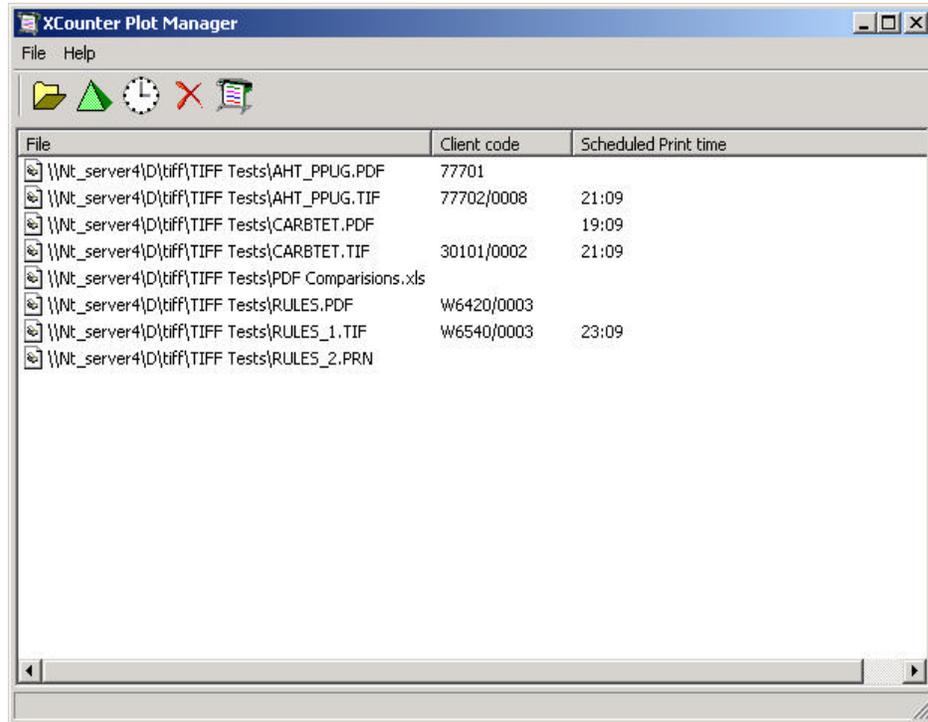
- #COMMAND /C DRIVE:PATH\XPOPUP [/options]

XPopup.exe has the following command line options:

- /hideicon      This switch runs XPopup.exe hidden, without an icon.
- /noexit        This switch runs XPopup.exe with the Exit option disabled on the task menu.
- /term          Terminates XPOPUP
- /preload=serverName      This switch enables XPopup.exe to read the XPopup configuration from the defined server, and loads the client code database if required. Normally these operations are not performed until the first print job occurs. If the client database is large, there may be somewhat of a delay (after the first print job only) due to the time it takes to load the client database. Enabling this option will improve this delay by preloading the database in the background.

# XPlotmgr.exe

This job submission tool is used to submit print jobs offline. This tool provides the client the ability to submit multiple print files to selected printers. If required, XPlotmgr will also attach a client/subcode to the print job by using an existing client/subcode database. Print jobs may also be scheduled to print at a later time within the same day submitted.



## Updating XCounter Software

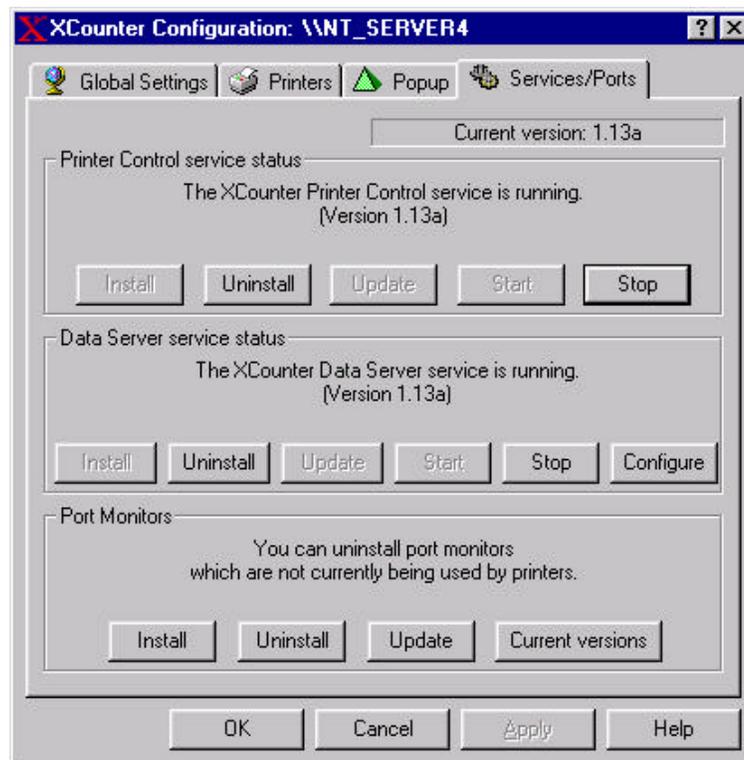
XCounter software will be updated periodically to include product enhancements. To install updated XCounter for NT software, the following process must be followed:

- Ensure the NT “Event Viewer” or any other program that monitors the event log is turned off before proceeding.
- Run the setup program from the XCounter update software. This process will update all required XCounter client files. The following process will update the server files.

**Note:** Remote administration is possible from any Windows 95/98/Me or NT/2000 workstation/server on the network.

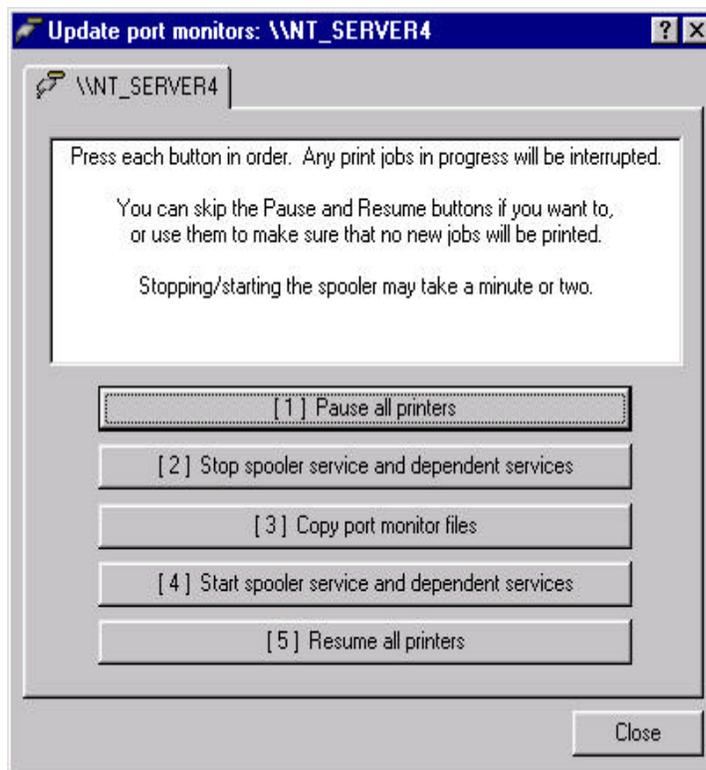
From the XControl screen highlight the server where XCounter is loaded. Right click on the server and select XCounter, Configuration (or press the red “X” button on the toolbar.)

- Select the Services/Ports tab on the server configuration menu.



- Note the XCounter Printer Control Service version number.

- Note the XCounter Data Server Service version number.
- Press the Stop button under the Printer Control Service. This will stop the Printer Control Service. This is required to copy and update software.
- Press the Stop button under the Data Server Service. This will stop the Data Server Service. This is required to copy and update software.
- Press the Update button under the Printer Control Service. This will copy and update the Printer Control software.
- Press the Update button under the Data Server Service. This will copy and update the Data Server software.
- Press the Update under the Port Monitors. The following update window will appear. Select the buttons 1 through 5 to update and install port monitors.



- Press the Start button under Printer Control Service to start service.
- Press the Start button under the Data Server Service to start service.
- Note the Printer Control Service, Data Server Service and XCounter Port monitors version numbers. These numbers should now reflect the updated XCounter software version.

**Note:** If XPopup or XBalance are being utilized, copy the updated utilities from the "Program Files\XCounter\NT" directory to the appropriate client/s or to the public directory that is being used for the login script. Ensure that these utilities also reflect the updated software version.





**DIGITAL**  
**THE DOCUMENT COMPANY**  
**XEROX**

Xerox®, The Document Company®, the digital X®, Keep The Conversation Going, Share The Knowledge, PrintMix®, ControlWare®, PrintExchange®, MetaWare™ and XCounter™, are trademarks of XEROX CORPORATION. Windows NT® is a trademark of Microsoft Corp. NetWare® is a trademark of Novell systems. All other product and/or company names used herein are trademarks of their respective owners. Product appearance and/or specifications subject to change without notice.  
©1999, Xerox Corporation